

INDUSTRY WEEK

Stauffer, Wilson & Geo. Meyer Sign Long-Term Exclusive Sales Agreement

SAN FRANCISCO—Stauffer Chemical Co., manufacturer, and Wilson & Geo. Meyer & Co., distributor, have announced the signing of a long-term exclusive sales agreement. The agreement was announced recently in New York by Hans Stauffer, president of the chemical manufacturing company, and Wilson Meyer, president of the distributing organization.

Under the agreement, the Meyer firm will widen its distribution in

the West and Midwest to handle the increased production of new pelletized agricultural phosphates produced by the Stauffer company.

When, in its pioneer days, Stauffer embarked on the manufacture of agricultural phosphates at plants in Richmond and Vernon, Cal., it designated the Meyer firm as its sales agent.

Since then, both firms have expanded. Stauffer Chemical now operates nationally, and its stock is

(Continued on page 29)

Northern Chemical Expansion Projects at Searsport, Maine Nearing Completion

SEARSPORT, MAINE—The Searsport expansion projects of Northern Chemical Industries are nearing completion, with work being completed on schedule, according to a Jan. 20 progress report from J. E. Totman, Baltimore, president of Northern Chemical.

General contractors are the Girdler Co. and the Leonard Construction Co. Included in the over-all expansion are several integrated units under the Girdler contract and a new 10-ton-a-day sulphuric acid plant being erected by the Leonard firm,

Mr. Totman reported.

The latter is in addition to the original 70-ton-a-day sulphuric acid plant built in 1944.

Upon completion, Northern Chemical will have a total rated capacity of 170 tons of 100% sulphuric acid a day, but actual production will be in excess of 200 tons, Mr. Totman said.

The largest expansion project, for the manufacture of anhydrous ammonia, nitric acid and nitrogen solutions, is under the supervision of

(Continued on page 29)

Escambia Bay Chemical Schedules Formal Dedication of Pensacola Nitrogen Plant

PENSACOLA, FLA.—The multi-million dollar Pensacola plant of the Escambia Bay Chemical Corp., which is currently producing 200 tons of anhydrous ammonia daily, will be formally dedicated Feb. 17, David J. Mark, vice president and plant manager, has announced.

The ceremonies will attract top executives of the chemical industry and its allied fields, as well as officials of Escambia Bay Chemical Corp. and its parent companies.

Ground for the plant, located 20 miles east of Pensacola near Milton, Fla., on Escambia Bay, was broken April 29, 1955. Production of ammonia was begun Dec. 28,

1955. Ammonium nitrate solutions are now being shipped from the plant by rail and truck.

Products manufactured, bearing the trade names Baysol and Ammonite, are distributed in an eight-state area through Ashcraft-Wilkinson Co. of Atlanta.

The Pensacola Plant was engineered and constructed by Chemical Construction Corp., New York City.

The Escambia Bay Chemical Corporation was formed late in 1954 by United Gas Corp., Electric Bond & Share Co. and the National Research Corp. Executives of these companies will be on hand for the dedication.

Grace Anticipates \$100 Million Capital Expenditure in 1956; 40% for Chemicals

NEW YORK—W. R. Grace & Co. expects to authorize \$100 million in capital expenditures this year, with about 40% in chemical expansion.

Allen S. Rupley, executive vice president and principal financial officer, recently told the Cleveland Society of Security Analysts that the remaining 60% would be divided about equally in a ship replacement program for Grace Line and for various South American enterprises.

Including Grace Line, the firm's anticipated capital expenditures this

year in chemicals would be 60%, Mr. Rupley said. This includes projects in progress at this time and also others in the first planning stages.

Since 1953 W. R. Grace & Co. has invested about \$153 million in chemicals, primarily through the acquisition and merger of the Davison Chemical Corp., a fertilizer producer, and Dewey and Almy Chemical Co., Cambridge, Mass., manufacturer of chemical specialties, along with establishment of Grace Chemical Co.,

(Continued on page 29)

USDA Recommends 8% Cut in Summer, Late Potato Crop

—See Table on Page 8—

WASHINGTON—An average cut of 8% in total acreage of summer and late potatoes in 1956 has been recommended by the U.S. Department of Agriculture in its annual acreage-marketing guides.

The guides recommend that growers in the 29 late states reduce plantings to 1,005,200 acres in 1956, compared with the 1,096,200 acres planted in 1955. Recommendations are that growers in the 10 summer commercial states plant 65,000 acres in 1956 compared with the 71,300 acres planted in 1955. Issued seasonally prior to planting time, the guides are designed to assist potato growers in planning production. Action by growers on the department's recommended acreages for potatoes is voluntary.

Specific acreage guide recommendations for summer and late potatoes by states, are shown on page 8.

USDA Cuts Corn Acreage Allotments

15% Reduction Set In 840-County Area

WASHINGTON—The U.S. Department of Agriculture Feb. 1 announced an allotment of 43,280,543 acres for the 1956 corn crop in the commercial corn crop area.

The allotment is for 840 counties in all or parts of 23 commercial corn area states, principally in the Midwest, Mid Atlantic and Southeast areas.

The 1956 preliminary allotment is about 15% smaller than the 1955 allotment of 49,842,697 acres in 805 counties in 21 states. The 1954 allotment was 46,995,504 acres in 834 counties in 22 states.

Quotas Approved for 1956 Rice Crop

WASHINGTON—Rice growers approved marketing quotas for the 1956 rice crop in the referendum held Jan. 27, according to preliminary reports received by the U.S. Department of Agriculture.

The preliminary tabulation of 10,430 votes as reported from rice-producing states indicates 8,842 or 84.8% approved quotas.

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Status of Farm Bill in Senate Still Uncertain

President Expected To Veto Return to High Rigid Supports

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON—A highly mercurial situation prevails here on the farm bill now under consideration by the Senate Agriculture Committee. Information from the most reliable sources within the committee shifts widely after each session.

The most positive statement which may be made now is that if the Congress were to enact a repeal of the flexible price support provisions of the Farm Law of 1949 and adopt the bill already passed by the House at its last session in 1955, it will meet a presidential veto. This information comes from the top Senate leadership on the Republican side of the farm bloc.

It means that no matter what other concessions may be made to get a bill, the White House is still backing Ezra Taft Benson, secretary of agriculture, in his fight for the flexible support principle and it does not intend to go back to rigid high supports for the basic commodities.

As this information becomes available it was also learned that the committee is stymied on its attitude toward high supports for basic commodities on a quality basis. This proposal is favored by Senator Milton Young (R., N.D.), who senses in it a compromise between the flexible and rigid support blocs.

This provision, if approved by Congress, would give the northern spring wheat areas an assured 90% of support for this top quality wheat while other areas, the Southwest particularly, would be supported at a discount from the 90% of parity level.

At this time the two-price proposal for rice seems stymied by international complications. It seems that

(Continued on page 28)

More Research on Soils, Water Asked By Advisory Group

WASHINGTON—Improved methods for fertilizer quality control, new research in watershed hydrology (science of how water behaves on land), and in soil structure and expanded studies of moisture conservation in both arid and humid regions were among top-priority research needs cited by the U.S. Department of Agriculture's Soils, Water, and Fertilizer Research Advisory Committee at its annual meeting in Riverside, Cal., recently.

The committee underscored the major importance to the nation of

(Continued on page 25)

Monsanto Chemical 1955 Sales Total \$522 Million

ST. LOUIS—Sales of Monsanto Chemical Co. and its consolidated subsidiaries, including Lion Oil Co. Division, for 1955 amounted to \$522,349,097.

Unaudited net income for the year 1955 was \$42,169,970 which is equivalent, after provision for preference dividends, to \$1.98 a common share on 20,998,945 shares outstanding on Dec. 31, 1955.

Earnings for 1955 were not strictly comparable with those for 1954 because the merger with Lion Oil Co. made advisable some accounting procedure changes, effective for the year 1955. These changes do not materially affect reported earnings and will be described in detail in the company's annual report.

At the regular meeting of the

board of directors, the regular quarterly dividend of 25¢ a share was declared on the company's common stock payable March 15 to holders of record Feb. 24, 1956.

W. W. Schneider, vice president, treasurer, general counsel and member of the board and of the finance committee, was elected to the executive committee to succeed R. R. Cole, executive vice president, who retired in accordance with the company's retirement plan Jan. 31 after 40 years' service with the company. Mr. Cole also resigned from the board, effective Jan. 31. The position of executive vice president will be discontinued with Mr. Cole's retirement.

CSMA MEETS IN MAY

CHICAGO—The 42nd mid-year meeting of the Chemical Specialties Manufacturers' Assn. will meet at the Drake Hotel here for a three-day session, May 20-22. Program plans will be announced later, according to H. W. Hamilton, 50 E. 41st St., New York 17, secretary of the group.

Changes in South Carolina Warehouse System Asked

COLUMBIA, S.C. — A legislative committee investigating the warehouse system of the South Carolina State Department of Agriculture has recommended complete reorganization of the system.

Changes recommended included eliminating from state bonded warehouse storage such items as fertilizer, bagging, and insecticides, "which are not easily audited."

Two persons have been convicted of violating the state warehouse statutes this year, and J. Roy Jones, who recently resigned as state commissioner of agriculture because of illness, is under indictment in the same case.

WINS 4-H CONTEST

URBANA, ILL. — Jack Koertge, Bone Gap, Edwards County, topped all entries in the 1955 Illinois 4-H X-Tra Yield Corn contest with an average yield of 193.8 bu.

Hercules Powder Sales, Net Income Increase in 1955

WILMINGTON—Hercules Powder Co. in its 1955 report to stockholders showed a 21% increase in sales and an increase of 34% in net income.

Net sales and operating revenue in 1955 amounted to \$226,651,058, all-time high, compared with \$185,475,566 in the preceding year.

Net income after all charges was \$19,012,125, equal to \$6.90 a share of common stock. This compares with net income of \$14,140,070 in 1954, equal to \$5.10 a share.

The company paid out in wages and salaries during 1955 a total of \$63,158,974 to its 11,281 employees. Albert E. Forster, president of Hercules, said in his letter to stockholders that wage rates averaged approximately 6% higher than in 1954.

Dividend payments were increased from \$3 to \$3.30 a share, which Mr. Forster said represented a somewhat lower percentage of earnings than recent years "in anticipation of an increasing need for funds to meet contemplated expansion."

Expenditures for construction in 1955 totaled \$12,998,000, financed entirely through internally-generated funds. Mr. Forster said the 1956 construction program is expected to exceed the all-time high of some \$15 million spent for this purpose in 1954.

The company's president cited another major construction project completed during the year at Tarrant, Ala., by the Ketona Chemical Corp., in which Hercules and Alabama By-Products Corp. each own 50% of the stock.

The report showed that 17% of Hercules' production was consumed during 1955 by the protective coatings industry; 13% by the paper industry; 10% in mining and quarrying; 9% by synthetic fibers; 8% by the plastics industry; 8% in agricultural chemicals; 5% each by the petroleum and rubber industries and by identifiable military uses; 3% by the construction industry; 2% by the adhesives industry, and 15% by others.

Research expenditures for 1955 totaled \$7,903,000, an increase over the preceding year when \$7,578,000 was spent for this purpose.

"We are planning considerable expansion not only for existing plants and products but also for wholly new processes," Mr. Forster stated in a section of his letter to stockholders dealing with the year ahead. "There are a number of new materials under various stages of consideration, from the laboratory phase to field testing of finished products."

Dr. McVickar, chief agronomist, said the company will produce 100,000 tons of fertilizer in 1956, an increase from 90,000 tons in 1955.

McVickar, who received his Ph.D. from Ohio State University, is a graduate of the University of California and the University of Wisconsin.

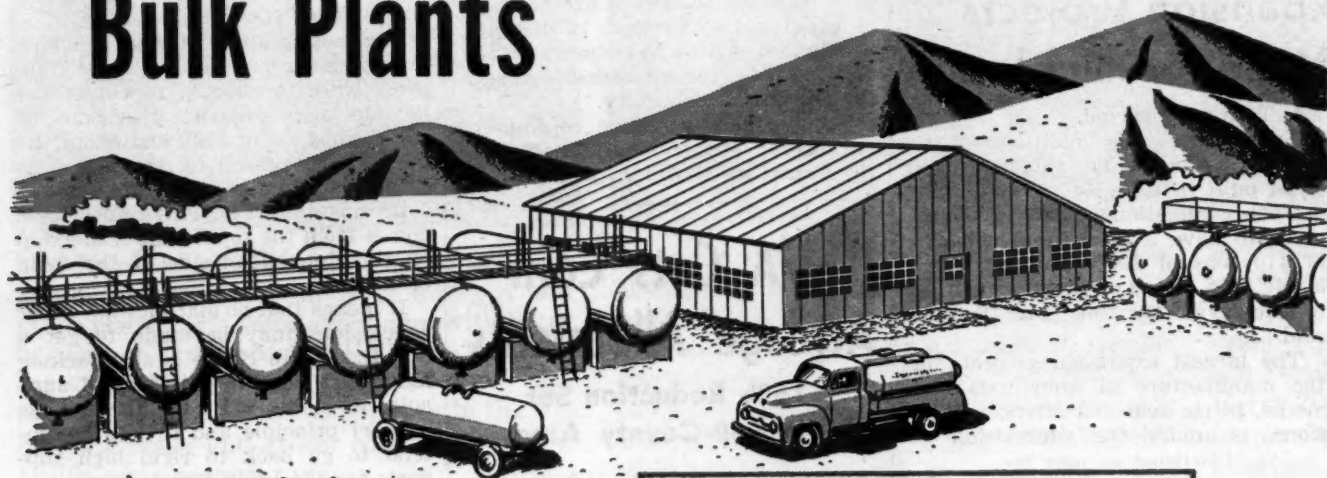
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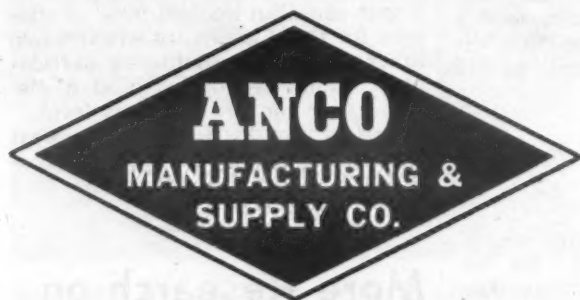
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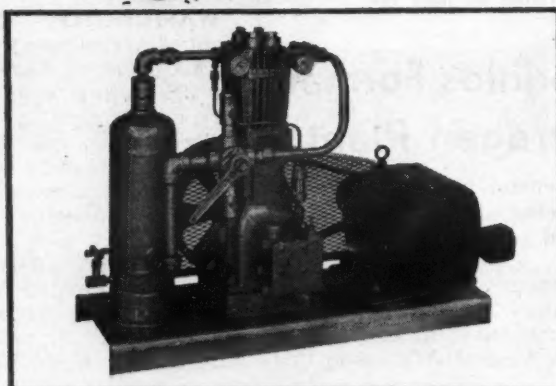
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Dr. Malcolm H. McVickar

Calspray Appoints Malcolm H. McVickar Chief Agronomist

RICHMOND, CAL.—Dr. Malcolm McVickar, chief of the agronomic division of the National Plant Food Institute, has been appointed chief agronomist for the Calspray Chemical Corp., it was announced Jan. 28 by Leo R. Gardner, vice president and manager of research and development for the company. The appointment becomes effective April 1.

Dr. McVickar will make his headquarters at the company's home office in Richmond, Cal., where its parent company, the Standard Oil Company of California, is setting up a new \$16,000,000 fertilizer operation. The six plants of the new fertilizer plant will produce a wide variety of fertilized, complex fertilizers. Completion is scheduled for early fall of 1956.

Dr. McVickar has been an agronomist since 1936 when he graduated from the University of Illinois with honors. He took his graduate work at Ohio State University where he received his Ph.D. in agronomy in 1939. While preparing for this advanced degree, Dr. McVickar worked as a graduate assistant in the state testing laboratory.

After graduating from Ohio State, Dr. McVickar worked for a short time for the Farm Security Administration, then went to Virginia as assistant agronomist where he advised to associate agronomist and agronomist in charge of outlying field stations.

Dr. McVickar left his position at the Virginia Agricultural Experiment Station to join the National Fertilizer Assn. as chief agronomist Sept. 1, 1948. With the consolidation of the National Fertilizer Assn. and the American Plant Food Council, he was named head of the agronomic education activities for the newly formed National Plant Food Institute.

Author of two books, "Using Commercial Fertilizer," written for the high school level, and "Pasture Handbook," now being published by the Interstate Publishing Co., Dr. McVickar has also written numerous scientific articles and hundreds of popular articles in trade journals and magazines.

He served for eight years as secretary of the National Joint Committee on Fertilizer Application, a group which represents the American Society of Agricultural Engineers, the American Society of Agronomy, the American Society for Horticultural Science, the Farm Equipment Institute, the National Canners Assn. and the National Plant Food Institute. He is also a member of The American Society of Agronomy and the Soil Conservation Society of America.

Fertilizer Mechanization Conference Scheduled at MWSIC Chicago Meeting

CHICAGO—A fertilizer mechanization conference is scheduled for Friday afternoon, Feb. 17, at the Edgewater Beach Hotel here in connection with the eighth annual Midwestern agronomists-fertilizer industry joint meeting sponsored by the Middle West Soil Improvement Committee, beginning on the 16th.

As announced previously, the first day's session will include talks by college agronomists reporting on research in a number of midwestern states; a paper on insecticide-fertilizer mixtures, and a talk on new soil insecticides. (Crolife, issue of Jan. 9, page 19.)

The morning of Feb. 17 will be devoted to further talks, including an address by Dr. Russell Coleman, executive vice president of the National

Plant Food Institute, Washington, D.C.

Participating in the fertilizer mechanization conference Friday afternoon will be engineers of farm implement manufacturing companies and representatives of the fertilizer industry. D. A. Williams, of the Minnesota Farm Bureau Service Co., St. Paul, Minnesota, will be moderator.

The conference's purpose is to give the implement industry engineers an opportunity to obtain information that will help them plan and design fertilizer application equipment best suited to today's farm needs, said Z. H. Beers, executive director of the Middle West Soil Improvement Committee.

The program will include a panel of men prominent in the industry and college fields. Summary statements will be presented as follows: "Solid Fertilizers," Dwight Sanders, director of research, Plant Food Division, Swift & Co., Chicago; "Complete Liquids," R. B. Ellsworth, president, Ellsworth Equipment & Engineering

Co., Indianapolis, Ind.; "Bulk Spreading," J. D. Cook, fertilizer division, Illinois Farm Supply Co., Chicago, and "Fertilizer Placement," Dr. A. J. Ohlrogge, agronomy department, Purdue University.

Additional panel members will be Vincent Sauchelli, chief agronomist, Davison Chemical Corp., Baltimore, Md.; R. P. Thomas, technical service advisor, Plant Food Division, International Minerals & Chemical Corp., Chicago; Dr. George E. Smith, soils department, University of Missouri, and Dr. George Scarseth, director American Farm Research Assn., LaFayette, Ind.

The panel discussions will be followed by a question and answer session.

The Joint Agronomists-Industry Meeting, February 16-17 is expected to draw an attendance in excess of 600, according to Mr. Beers. Research and extension soils specialists from 13 Midwestern agricultural colleges will take part.

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Richard H. Wilson

Wilson Chemical Sales Merges With Great Western Chemical Co.

PORTLAND, ORE. — Merger of Wilson Chemical Sales Co., Portland, with the newly formed Great Western Chemical Co., sales agents and distributors of agricultural and industrial chemicals, has been announced by W. C. McCall and Richard H. Wilson.

Mr. Wilson, who has more than 20 years' experience in chemical sales to agriculture and industry, will be general manager of the new Portland operation.

Previous to forming his own company two years ago, he was associated with another distributor and most recently with Chipman Chemical Co.

Temporary headquarters of Great Western Chemical Co. are at 1504 Northwest Johnson St. The company expects to relocate office and warehouse facilities in the near future, according to Mr. Wilson. He is in the process of selecting department heads and forming a sales staff. Great Western also recently announced merger with the chemical and raw material division of Carl F. Miller & Co., in Seattle.

Coke Oven Ammonium Sulfate Output Gains In First 11 Months

WASHINGTON — Production of coke oven ammonium sulfate during November totaled 160,723,489 lb., a gain from 145,659,500 lb. in November, 1954, according to the Bureau of Mines. Production in October, 1955 was 164,709,836 lb.

Output for the first 11 months of 1955 totaled 1,771,610,117 lb., a gain from 1,490,561,300 lb. in a corresponding period in 1954.

November, 1955 sales totaled 137,164,922 lb., compared with 136,961,179 lb. in October and 117,584,600 lb. in November, 1954. Stocks on hand at the end of November, 1955 totaled 392,861,695 lb., a 6.4% increase from 369,274,343 at the end of October.

Du Pont Adds Garden Chemicals Salesman

NEW YORK—A new salesman for garden chemicals in the Detroit area has been added to the Du Pont sales force. He is James F. McDonough of Springfield, Pa. Mr. McDonough joined Du Pont Dec. 21, 1955, and took up his new assignment in Detroit Jan. 16.

Mr. McDonough received his bachelor of science degree in agronomy from the University of Maryland in 1951, and then went to work as a salesman for farm and garden chemicals, first in Carlisle, Pa., and then in southeastern Pennsylvania.

Aerial Treatment of Some Crops Doubled In 1955, Minnesota Spray-Dusters Report

ST. PAUL, MINN.—Over 40 Minnesota aerial spraying firm operators and airport managers attended the annual Aircraft Sprayers' and Dusters' Short Course at the University of Minnesota campus, January 25. Most of the group were members of the Minnesota Airport Managers' Assn., which held its meeting at the Hotel Leamington, Minneapolis, at the same time.

According to J. O. Christianson, director of short courses, and A. W. Buzicky, course chairman and associate state entomologist, this year's course was very successful, with a wide range of topics and problems discussed in informal panel groups and through lectures.

Minnesota's short course in aircraft spraying and dusting was one of

the earliest in the nation and was first held in 1948. The year before, the State Legislature had passed a law requiring registration of all aerial sprayers and compliance with certain laws—the short course was one attempt to "brief" spray operators on those laws and on accepted techniques of spraying and to keep them up to date with the latest research findings in weed and insect control.

This year, the acreage of wheat, barley and oats sprayed took a big jump—from 40,000 acres of wheat sprayed in 1954 to 91,000 in 1955; from 33,000 acres of barley in 1954 to 66,000 in 1955; and from 28,000 acres of oats in 1954 to 54,000 in 1955. Flax, brush, and corn spraying increased slightly.

In a mosquito control panel discussion, the most satisfactory and

successful spraying was reported from Minnesota's northeastern counties. One operator who had tried farmstead spraying said that it was very successful—mosquitoes tended to drift in very soon from other areas. Elimination of mosquito breeding by spraying lakes and ponds was very successful.

A new technique of aerial brush control is being tried in northern Minnesota. Associate state entomologist A. W. Buzicky said it could be used to kill back brush that might be shutting out sunlight. This would "release" young conifers to grow. Another use would be to open up infested tree areas for more accurate and effective placing of insecticides. "It may be a very important development in modern forest management," he said.

The sprayers also discussed the problem of identifying mink and turkey ranches so that they could be



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vided by the low-flying aircraft— which panic animals and birds. It was pointed out that a mother mink, startled by low-flying aircraft, may turn cannibal and eat her newborn young.

The group agreed to work closely with mink ranch operators in an endeavor to work out some suitable way of identifying such places from the air.

Many sprayers had, on their own, attempted to keep maps of locations of such ranches, but there are so many and they change location a good deal so that is very difficult.

Participants in the course included K. Cutkomp, associate professor of entomology; J. R. Sandve of the state entomologist's office; Joe Derorak, manager of West Central Airways, Fergus Falls; Gordon Newstrom, Mesaba Aviation, Grand Rapids; Robert G. Robinson, assistant professor of agronomy; and R. J. Abbott, Minnesota's assistant commissioner of Aeronautics, Holman Field, St. Paul.

Hooker Electrochemical Names New Officers

NIAGARA FALLS, N.Y.—Election of two Hooker Electrochemical Co. officers was announced recently by Bjarne Klaussen, president. Thomas E. Moffitt has been elected executive vice president and a director, and R. Wolcott Hooker has been elected senior vice president.

Mr. Moffitt had been vice president in charge of Hooker's western operations. He is a director and a vice president of Hooker Chemicals, Ltd., Vancouver, B.C.; a director and a vice president of Chemical Salt Production Co., Salt Lake City; a director of the Tacoma (Wash.) Chamber of Commerce; director of the National Bank of Washington at Tacoma; director of the Washington Research Council and of the Rainier National Park Co., and vice president of the Association of Washington Industries. Mr. Moffitt also is on the Advisory Committee of the Washing-

ton Institute of Technology.

Mr. Hooker was vice president responsible for purchasing and public relations. He is a director of Hooker Chemicals, Ltd., and Marble-Nye Co., a Hooker subsidiary. He is a member of the Chemical Corps Industry Advisory Council; a director-at-large of the Armed Forces Chemical Assn.; a member of the National Industrial Conference Board; an alternate director of the Manufacturing Chemists Assn.; president of the Chlorine Institute and Synthetic Organic Chemical Manufacturers Assn., and on the boards of several local organizations.

LEAVE OF ABSENCE

ST. LOUIS—E. J. Bock, associate director of marketing for Monsanto Chemical Co.'s Inorganic Chemicals Division, has been granted leave of absence to attend the spring session of the Advanced Management Program at the Harvard University Graduate School of Business Administration.



Dallas Cantwell

JOINS SOUTHERN NITROGEN— Dallas Cantwell has been named assistant general sales manager of Southern Nitrogen Co., it has been announced. His headquarters will be in Savannah, Ga., where he will assist in selecting, training and supervising the company's sales personnel in the southern area. A native of Tennessee, Mr. Cantwell holds a degree in agriculture from the University of Tennessee. He has been a county agent and was formerly associated with Spencer Chemical Co. as Southeast District agronomist. During World War II, he was a captain in the armored field artillery and saw combat in Europe.

L. W. Sessions Named District Sales Head for Monsanto Inorganic

ST. LOUIS — L. W. Sessions has been named district sales manager for Monsanto Chemical Co.'s Inorganic Chemicals Division in Detroit, Mich., succeeding H. P. Walmsley, it was announced recently by Tom K. Smith, Jr., division director of marketing.

Mr. Walmsley will come to St. Louis to perform special assignments for the Inorganic division sales department. Both assignments are to be effective Feb. 1.

Mr. Sessions, who has just recently returned from a three year assignment with the development group of Monsanto Chemicals Ltd. in London, England, is a native of Muskegon, Mich. He holds an A.B. degree in economics and government and a B.S. degree in chemical engineering from the University of Michigan. He also holds an M.S. degree in engineering administration from Washington University. He served in World War II in the Naval Research Laboratory, and joined Monsanto in 1946 in the John F. Queeny plant. He joined the Organic Chemicals Division development group in 1948, and went into the sales department of the division in 1951. He was assigned to the English post in 1953.

A native of Ohio, Mr. Walmsley originally was with the Swann Chemical Co., which merged with Monsanto in 1935. Prior to joining Swann, he had attended Lehigh University and Colorado School of Mines. He was sales office branch manager in Cleveland from that time until he assumed the duties at Detroit, where he has been since 1938.

PEST WARNING

SACRAMENTO — Flood - ravaged Sutter County, California, can expect spread of such pests as Klamath weed, root nematodes and puncture vine, according to T. D. Urbahns, county agricultural commissioner. Mr. Urbahns warned there "will be weeds galore from all over the Feather and Yuba River watersheds" in the inundated areas.

Smith-Douglass Selects New Packer

This photograph shows the New Bemis Fertilizer Packer in operation in the big Smith-Douglass plant in Streator, Illinois. Smith-Douglass' Plant Superintendent says, "After a thorough test, we find that the Bemis Fertilizer Packer is setting a new record for accuracy. We like it and our men like it."

Bemis



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Bemis Bags for the Fertilizer Industry

Multiwall • Burlap • Cotton
Waterproof (laminated-textile)

The fertilizer you save through accurate weights and the labor you save through speed and a smaller crew will soon pay for your new Bemis Fertilizer Packer.

In actual plant operation the Bemis Packer is filling and closing sixteen to eighteen 80-lb. bags per minute . . . and holding to a weight tolerance of plus or minus 4-oz.

A major reason for this exceptional performance is the Bemis-originated 3-bucket design, which gives more time to fill each scale accurately.

Other features . . .

★ The Bemis-designed automatic sewing machine actuator and cutoff.

★ The Vee-Trof conveyor, which holds the bags upright without rails . . . no wrestling with filled bags. Your plant employees will think it's wonderful.

★ A choice of automatic or manual discharge.

★ A maximum of two men per unit is needed to operate.

★ Size range—50, 80, 100 lb. multiwall bags; 100, 200 lb. textile bags.

This is the biggest advance in fertilizer packing in many years.

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read by
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The right answer to one of your many problems...

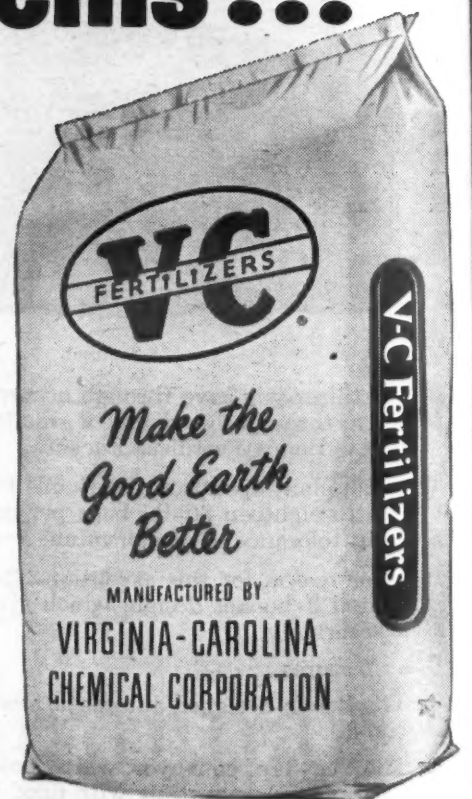
Farming today is a complicated business. It requires practical knowledge of many things—soils, crops, seed, livestock, machinery, insect control, rotation, conservation, diversification, business management, salesmanship—to mention only a few. You have to have the right answers to many problems to be a good farmer.

To you, the selection of the best fertilizers for your crops and soils is only one important decision essential to your success. To V-C, however, the manufacture of the best fertilizers is a full-time job to which we devote more than 60 years of accumulated skill, facilities and experience.

V-C men, mines, laboratories and factories are constantly working to provide you with better and better fertilizers for each dollar you invest. The price of V-C Fertilizers has remained low as compared to other things you buy, but the crop-producing power of V-C Fertilizers continues to increase.

V-C Fertilizers are made in many different grades and analyses so that there is a V-C Fertilizer for every crop on every soil. Each V-C Fertilizer is a rich, mellow blend of better plant foods scientifically balanced to supply the needs of the crop for which it is recommended.

By supplying you with the right fertilizers for your crops and soils, V-C solves one problem for you easily and economically. The V-C aim is to help you make farming a better-paying business.



See Your V-C Dealer

Place your order early and request prompt delivery! You will be glad you bought V-C Fertilizers when you see your crops.

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Charles E. Martin

Charles E. Martin New Area Sales Head for MC Phosphate Minerals

CHICAGO — The appointment of Charles E. Martin as northern area sales manager of the Phosphate Minerals Division of International Minerals & Chemical Corp. has been announced by George W. Moyers, vice president in charge of the division.

Mr. Martin will cover the northern states and will have his headquarters at International's Chicago offices. He has been a sales representative in the midwest district for the corporation's Potash Division. He is a graduate of the University of Illinois and served in the U.S. Coast Guard during World War II.

R. Kirby Shirley, Freeport Officer, Dies

NEW YORK—R. Kirby Shirley, senior vice president and a director of Freeport Sulphur Co., died Jan. 24 at New York Hospital. He was 56 years old.

Mr. Shirley was associated with the sulphur industry for 34 years. He joined Freeport Sulphur in 1922 as chief clerk to the auditor in the firm's Freeport, Texas, office.

He was instrumental in the building of the Great Neck (N.Y.) Community Church. Mr. Shirley was a native of Texas and resided at 43 Gateway Dr., Great Neck, N.Y.

George Johnson Joins E. H. Brown Agency

CHICAGO—George Johnson, associate editor of Successful Farming, joined the Agricultural Department of the E. H. Brown Advertising Agency of Chicago Feb. 1.

Mr. Johnson grew up on a northern Illinois livestock farm. A 1949 graduate of the University of Illinois, he majored in agronomy and did graduate work in agricultural economics. He served as assistant farm adviser in Whiteside County, Illinois, in charge of the soils information program there.

In 1950, Mr. Johnson joined Successful Farming, as soils, crops and agricultural chemicals editor. In 1955, he received the Soil Builders Award of the American Plant Food Institute for having produced the nation's outstanding soils editorial program in a farm magazine.

R. P. Cagley Named To New AACCO Post

NEW YORK—R. P. Cagley, formerly assistant sales manager of the American Agricultural Chemical Co.'s Cleveland, Ohio branch, has been appointed assistant sales manager of the company's East St. Louis, Illinois branch effective Feb. 1.

Strong-Scott to Enter Chemical Processing Equipment Field

MINNEAPOLIS—The appointment of J. Thomas Haigh as director of marketing has been announced by Lucian Strong, president of the Strong-Scott Mfg. Company, manufacturer of equipment for the grain, feed, milling and coal pulverizing industries.

Mr. Haigh will head the new marketing division which will direct Strong-Scott's entry into the chemical processing equipment field, as well as the expansion of the present new-product development program for the milling and feed industries. In addition to its line of equipment for size reduction, separation, mixing, and conveying operations, Strong-Scott will offer, under the new program, custom-built equipment specifically engineered and designed for customer processes and problems.



FIRST SHIPMENT—Pictured above is the first shipment of ammonium nitrate solution from the new \$16 million Selma (Mo.) plant of Mississippi River Chemical Co., a division of Mississippi River Fuel Corp., St. Louis. The plant now is producing anhydrous ammonia, ammonium nitrate solutions and solid ammonium nitrate. In the photo, from left to right, are John L. Sanders, sales manager of Mississippi River Chemical Co.; James W. Mathers, Bradley & Baker, sales agent for the firm; Cecil Lashlee, plant manager, and R. G. Powell, Mississippi River Chemical Co., technical director.

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Means Insecticide Profits
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Soil Insect Campaign!



HERE'S HOW IT WORKS:

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Soil insects can strike almost anywhere... that's why farmers need *Heptachlor* protection. For every 100 acres of cropland in your selling area there's a potential market of 50 gallons of Heptachlor. That's the big profit news for you. *Cash in!*

2 Heptachlor pre-sells this market for you

Key radio stations reaching millions of farmers, powerful state farm papers, and leading farm circulation newspapers will all carry hard-hitting ads to pre-sell this valuable market. *You cash in!*

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You tie in with this powerful Soil Insect merchandising program with colorful jumbo displays, window banners, folders and ad mats. They almost close the sale for you. Once again, *you cash in!*

PLUS... PROVEN HEPTACHLOR PERFORMANCE

Recommended by state and Federal Experiment Stations, Heptachlor performance has been proven by years of successful soil insect control. Farmers know HEPTACHLOR is the name that means higher yields and bigger dollar income.

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Please send me details on the 1956 Heptachlor Soil Insect Program.

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At Olin Mathieson, agronomists, engineers and chemists, in cooperation with state and national agricultural authorities, are working to help all farmers reach the goal of more profitable production. As a Mathieson dealer you can help build better farms and a better future for the farmers in your community.

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L. J. Polite, Jr.

L. J. Polite, Jr., John W. Kennady in New Diamond Posts

CLEVELAND—L. J. Polite, Jr., for the past two years agricultural chemicals sales manager in the Chlorinated Products Division of Diamond Alkali Co., Cleveland, Feb. 1 took over a new and broader assignment following a re-alignment of responsibility.

In announcing the change, Loren P. Scoville, general manager of the division, said that Mr. Polite now becomes product sales manager for a diversified group of organic chemicals having wide industrial application. He succeeds W. B. Beeson, Jr., recently named manager of Diamond's New York-New England branch sales office in New York City.

Mr. Scoville also announced that John W. Kennady, general manager of Diamond Black Leaf Co. (an affiliate of Diamond Alkali) since its formation in February, 1955, leaves his present position to succeed Mr. Polite as sales manager of Diamond agricultural chemicals.

At his new post, Mr. Polite holds sales management responsibility for Chlorowax, a Diamond-developed chlorinated paraffin, chlorinated solvents (perchloroethylene, carbon tetrachloride and muriatic acid); and chloromethanes (methyl chloride and methylene chloride), which are produced at the company's Belle, W. Va. plant.

A veteran of 14 years service with Diamond, Mr. Polite joined the company as a sales representative in 1942 following graduation with a B.A. degree from Williams College. He was promoted in February, 1952, to the post of assistant sales manager of agricultural chemicals, making his headquarters at Diamond's eastern agricultural chemicals plant in Newark, N.J.

In January, 1954, he returned to Cleveland to become agricultural chemicals sales manager. Mr. Polite saw service in the Pacific area during World War II.

To his new assignment Mr. Kennady brings a broad background in agricultural chemical sales and engineering fields dating back to 1932 following his graduation with a B.S. degree from Pennsylvania State University. His studies also include post-graduate work at the University of Michigan and the University of Pennsylvania.

After operating his own poultry and breeder hatchery business for three years, Mr. Kennady joined the U.S. Department of Agriculture. During a subsequent nine-year span in government services, he was concerned with production credit, farm debt adjustment, farm tenancy and farm health projects. In 1944, came a 23-month "time out" for military service with the navy, after which he rejoined USDA.

In November, 1947, he became affiliated with Pennsylvania Salt Man-



John W. Kennady

ufacturing Co. Attached to its agricultural chemicals division, he was assigned to Kansas City, Mo., where he established that firm's sales and technical service office to cover nine north central states.

In June, 1950, Mr. Kennady joined the former Kolker Chemical Works, Inc., becoming manager of its plant at Houston, Texas, now Diamond Alkali's Greens Bayou plant. Two years later, he was named manager of Diamond's southwest district sales office at Houston, and in February, 1955, was appointed general manager of Diamond Black Leaf Co.

Mr. Polite and Mr. Kennady will continue to be located at Diamond's national headquarters in Cleveland.

POTATO GUIDE

(See Story on Page 1)

SUMMER AND LATE POTATOES WITH
SUMMARY FOR FULL YEAR

Group and state	1956 Acreage guide 1,000 acres	Percentage guide is of 1955 planted acreage %
Late states:		
Maine	129.2	83
New Hampshire	3.6	100
Vermont	3.4	100
Massachusetts	8.6	99
Rhode Island	4.2	95
Connecticut	8.9	97
New York (L.I.)	51.3	95
New York, upstate	42.0	100
Pennsylvania	60.0	100
West Virginia	13.0	100
9 Eastern	324.2	92
Ohio	22.0	100
Indiana	11.0	100
Illinois	4.0	100
Michigan	49.2	100
Wisconsin	56.0	100
Minnesota	77.5	92
Iowa	6.0	100
North Dakota	92.0	100
South Dakota	10.5	100
9 Central	328.2	98
Nebraska	19.5	100
Montana	9.8	99
Idaho	143.3	84
Wyoming	6.6	96
Colorado	53.6	94
New Mexico	.7	100
Utah	12.4	95
Nevada	1.5	88
Washington	29.2	75
Oregon	36.3	89
California	39.9	85
11 Western	352.8	87
29 late states	1,005.2	92
Summer commercial:		
Virginia	22.9	92
Maryland	3.4	100
Delaware	6.2	75
Kentucky	.7	100
Missouri	.6	100
Kansas	.4	80
Nebraska	1.5	100
Texas	6.2	75
Georgia	.7	99
New Jersey	22.4	91
10 Summer	65.0	91
Winter*	10.1	76**
Early spring†	19.4	77**
Late spring†	111.6	89**
Other‡	105.0	96**
U.S. total—All seasons	1,316.3	91

*Announced August, 1955. †Announced November, 1955. ‡Non-commercial acreage in early and intermediate states. **Per cent of 1955 harvested acreage.

SALES BY CREAMERIES

ST. PAUL—A University of Minnesota survey discloses that sales of feeds and fertilizers by 87 Minnesota creameries averaged \$57,801 in 1954.

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A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

How a Dealer Can Help in a Soil Testing Program

By **WERNER L. NELSON**
Midwest Manager
American Potash Institute

Soil testing helps promote the use of fertilizers. There are very few agricultural industries which have such a relationship between a state operated service and the sale of products. It is a service which provides for tests on the farmer's land with recommendations made by state or county agricultural workers. State controlled laboratories have many advantages.

Of first importance is the fact that the interpretation of the soil tests is based on experimental work by the university. Tests must be standardized on soils where responses to plant nutrients are known. It is the job of the university to conduct these experiments.

Recommendations are made by people not connected with the industry. No matter how conscientious the person making the recommendation is if he is connected with the industry some people will raise a question as to the recommendations.

Constant checks are made on accuracy of the tests. Contaminations, bad solutions, and errors are kept at a minimum. Technicians are carefully trained and run enough samples to keep in practice.

All of these points are important if soil testing is to continue to enjoy its present reputation and if it is to improve as new technical information is released.

The fertilizer industry can take an important part in the soil testing program thereby rendering a real and personal service to the farmer. Certainly the use of soil testing in arriving at fertilizer needs on individual farms should result in better and more frequent customer satisfaction.

1. Take soil samples for the farmer. The step which holds back growth of a soil testing program more than any other one thing is the actual taking of the samples. The farmer, like all of us, is either too busy or puts off taking the samples.

Here is where the fertilizer dealer can be of help. In the summer and fall he might spend several days taking samples for regular and prospective customers. This would give the dealer the opportunity to see some of the crops growing on the land and talk over problems with the farmer. The dealer could then send the samples in through regular channels and might or might not pay for the testing.

An important point is that with the dealer taking samples in the summer and fall the samples can be tested when the laboratory is not in its rush period. This means that the recommendations will come out well in advance of need.

Some lime and fertilizer dealers are providing such a soil sampling service for their customers. In a number of instances dealers report that they have sold fertilizer to 75% or more of the farmers whose fields were sampled.

2. Keep soil sample supplies in the office. Some dealers keep the official soil sampling boxes and information sheets available at their place of business. Soil sampling equipment

such as tubes or augers may also be kept for loan as farmers usually do not have these tools. Such a practice helps keep soil sampling before the farmer and landlord and while it is not as effective as taking the samples for the farmer, it is the next best step.

3. Stock fertilizers to meet recommendations. It is definitely to the dealer's advantage to carry materials and grades which can be used to meet the recommendations. In many instances the recommendations may contain alternatives and are accompanied by conversion tables.

Familiarity with the method of making recommendations and of converting pounds of N, P₂O₅ and K₂O to meet needs is essential. Dealers' meetings conducted by extension personnel provide the opportunity to learn about these calculations. Close contact with the county agent also serves to keep the dealer abreast of changes.

4. Make use of soil test summaries. Summaries of soil tests may be on a county, soil area or cropping area basis. Certainly one would not want to have a large supply of fertilizers high in phosphorus in an area where soils were high in phosphorus or high potash fertilizers where the soils were generally high in potassium.

5. Stress lime applications where soils show need. Fertilizers applied to acid soils will not be nearly as effective as when applied to soils limed in accordance with need as shown by soil tests. Usually lime is thought of primarily for legume crops. However, as we plan for high yields of non-legume crops lime is likewise essential.

In any event the dealer is taking a big chance in selling fertilizer to go on an acid soil. A poor return from the fertilizer means that the farmer will be a poor credit risk. Also the reputation of the dealer will suffer because his product did not produce. Certain dealers refuse to sell fertilizer to a farmer unless he limes his soil properly. These dealers feel that this is simply good business.

This summarizes a few of the ways in which the industry might participate in the soil testing program without actually getting into the headaches of actual testing and recommendations.



SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By **EMMET J. HOFFMAN**
Croplife Merchandising Editor

The farm supply dealer who has a loading platform can utilize it effectively as another show window. Sheltered platforms are ideal for displays of merchandise which the dealer has in stock and may otherwise never be noticed by the customer.

Dealers who are experienced with loading platforms find them well worth the expense of constructing and maintaining them. However, they have the disadvantage of allowing farmer customers to load their fertilizer or other merchandise without ever stepping inside the retail sales room. Thus, the opportunity of extra sales is not present because the customer is not exposed to merchandise displays.

Wisconsin Farmers Could Profitably Double Use of Fertilizer on New Seeding

MADISON, WIS.—Most Wisconsin farmers could double their fertilizer applications on new seeding and come out with a much higher net profit per acre from their grain and hay crops.

That's what C. J. Chapman, University of Wisconsin soils specialist, reports after eight years of comparing conventional fertilizer applications—about 250 lb. per acre—with doubled fertilizer amounts on fields seeded to grain and legumes.

Mr. Chapman reports that on 69 demonstration plots around Wisconsin, farmers compared 250 lb. applications of 0-20-0 and 0-20-20 with 500 lb. applications of the same fertilizers.

Farmers using the 250 lb. application of 0-20-0 fertilizer had a net profit of \$20.01 per acre from grain and hay on these plots, compared to \$29.65 from plots that received 500 lb. amounts. This is after fertilizer costs were deducted.

Average net profit per acre for farmers who applied 250 lb. of 0-20-20 or 0-10-30 per acre was \$34, and \$41.21 for those who used 500 lb. per acre of the same fertilizer.

Mr. Chapman says that in many cases, increased grain yields alone were enough to pay for the additional fertilizer, and there was still a big "residual" fertilizer supply left in the soil for the hay crop the following year.

The loading platform, provided it has a canopy to protect merchandise against rain, snow and the sun, can be a good substitute for a sales room display.

Thus, when a farmer drives up for fertilizer or other farm supplies, he can't help but see the line-up of merchandise on the loading platform. Such a display will produce a lot of extra sales.

Neatness is one essential element of platform displays, as it is in all types of displays. Disorder quickly kills the effectiveness of a display. Also, many dealers have built cart-type displays, much on the order of those used by filling station operators. Such mobile displays are easily rolled out of their overnight storage place and onto the platform. At night the platform displays can be taken in with a minimum of time and effort.

Dealers with limited retail display space should not overlook the possibilities offered by a display arrangement on the loading platform. Such a display can be an effective silent salesman.

Customers' "Pet Peeves"

Eight buyers' "pet peeves" which lose sales are listed in a Du Pont publication entitled, "The Salesman Story."

Du Pont sales instructors asked eight persons who contact salesmen, both in the office and at the retail level, to list their "pet peeves" against salesmen. The persons interviewed said they considered these "peeves" as the most antagonistic

(Continued on page 23)

How Farm People Accept New Ideas

Farmers go through several stages in learning about and in adopting new ideas. These stages may be classified as: Awareness, interest, evaluation, trial and adoption.

Some farmers will try any new idea that comes along, while others will accept an idea only after it is proven in their neighborhood. A major concern of agricultural leaders is that of narrowing the time gap between the early and late adoptions of recommended practices.

A report on this problem has been published in the form of a booklet entitled, "How Farm People Accept New Ideas." The basic framework of the report is the result of the group

efforts of the Subcommittee for the Study of the Diffusion of Farm Practices; an adjunct of the North Central Rural Sociology Committee which is sponsored by the Farm Foundation, Chicago. The booklet was printed by the agricultural extension service of Iowa State College.

The lag between what is known and what is done by most farmers has been the focus of considerable research in recent years, according to the booklet. An attempt was made by the authors to put together in one booklet the results of the various studies for use by agricultural leaders and various organizations.

The major purpose of the publica-

tion is to show the process by which ideas become accepted. This diffusion process is discussed from three points of view:

1. The stages through which an individual goes from the time he first learns of an idea until he adopts it, and the media which are most effective at these various stages.

2. Some situational and group influences affecting adoption.

3. Some of the characteristics of farm people as they relate to rate of adoption.

The booklet's authors state that the average time span from awareness to adoption of hybrid seed corn

(Continued on page 12)



Farmers get more profit from fewer acres with

PHILLIPS 66 AMMONIUM NITRATE

A companion high nitrogen fertilizer for your mixed goods!

Phillips 66 Ammonium Nitrate is the right nitrogen fertilizer to use with quality mixed fertilizer. When they use Phillips 66 Ammonium Nitrate, farmers realize lower unit production costs . . . more profit per acre! They make more money with less work, less worry—and from fewer acres.

Phillips 66 Ammonium Nitrate is *guaranteed* to contain 33.5% Nitrogen: 16.75% Nitrate Nitrogen, 16.75% Ammonia Nitrogen. The new multi-wall polyethylene-lined bags assure a free-flowing, easy-to-use product.

Phillips advertises its high quality, high nitrogen fertilizers all year 'round in a comprehensive list of leading farm magazines. And, of course, you can always depend on Phillips for prompt, efficient service.

Now available in New
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FARM SERVICE DATA Extension Station Reports

Missouri farm economists report that it pays to add enough fertilizer for high crop yields, whether farm prices go up or down. Their statement is based on tests using high, medium and low rates of fertilization.

Dr. Frank Miller of the University of Missouri says that in periods of high prices for corn, wheat, soybeans and hay, net returns can average as much as \$126 per acre for these crops, when large amounts of fertilizer are used based on soil tests. But when small amounts of fertilizer are added, net returns average only \$26 per acre.

When prices of these four major crops are near the long time average, fertilization according to soil tests can bring a net return of \$54 per acre, compared with a loss of \$8.20 from the low rate of fertilization.

Dr. Miller reports that when prices were below the expected long-time average, the high rate of fertilization returned a net gain of \$2.65 per acre, compared to a loss of \$33.20 when not enough fertilizer was added.

High soil fertility paid off for Harvey Stiegelmeier, 61, who operates a 330-acre farm near Normal, Ill., when he was named soybean champion of North America for the fourth time at the International Grain and Hay Show held in Chicago. He had previously won in 1946, 1947 and 1950.

Mr. Stiegelmeier's prize-winning soybean variety was Adams, developed by Iowa State College plant breeders. Soil improvement on the Stiegelmeier farm began more than 50 years ago, when Harvey's father began using sweet clover back in 1902. The Stiegelmeier farm was the first in the neighborhood to use lime. And today the soybean champion limes the soil regularly and puts on liberal amounts of phosphate as well as a full feed of other needed plant nutrients.

The land in soybeans had been limed and had received regular applications of phosphate. In addition, this year Mr. Stiegelmeier used large amounts of a magnesium potash fertilizer. On the corn and oats land he added a fertilizer high in nitrogen, phosphate and potash.

"Good land," says Mr. Stiegelmeier, "will give a greater response to fertilizer than basically poor land. As a matter of fact, the good land needs fertilizer more than the poor, because of the greater drain of plant foods in feeding the bigger crop yields."

With high fixed production costs and little unit price improvement in prospect for agricultural commodities, higher average field crop yields per acre hold the key to better net operating income for North Dakota farmers (without radical change in number and size of operating units), in the opinion of H. W. Herbison, North Dakota Agricultural College Extension Service marketing economist.

"Excepting wheat and the specialty row crops which are performing pretty well on the average, current production levels for North Dakota's close-grown field crops and hay are too low to contribute necessary net income per acre over cost of producing those crops," says Mr. Herbison.

"Wheat is currently producing 51% of the total value of all North Dakota crop production, and nearly 80% of the net return from all crops over

production and harvesting costs, spite of the fact that about two thirds of our total harvested crop acreage consist of crops other than wheat. Economically, such a situation can continue long without a lot of farmers going broke.

"Net returns over costs per acre roughly approximate \$14 to \$15 for wheat, based on 1955 yield performance and average price received. Barley and flax, closely paired as the number two crop choice of North Dakota farmers, returned net operating incomes per acre over cost a little less than \$5 in 1955.

"Oats and rye, with 1955 yields at average price received, failed to better than give farmers a break-even position with production cost for those two crops. Grain corn, soybeans, and field peas returned net income approximating 85 to 95% that for wheat in 1955; potatoes and sugar beets maintained their net income per acre ratios of 2½ to 3 times that of wheat.

"If North Dakota farmers are shoot for average net operator returns of \$20 per cropped acre harvested at current price and cost levels, the following increases in average bushel yields per acre will be needed over 1955: wheat 3 to 5 bu., barley 17 to 20, flax 5 to 6, rye 19 to 20, oats 40, grain corn 11, soybeans 5, field peas 3 bushels, and alfalfa 1½ tons. Such a change seems drastic, but so are the alternatives."

First place plaque in the 1955 Doniphan County, Kansas 100 Bushel Corn Club contest was won by Theodore Sinker, Highland, Kansas farmer, who used the right amount of fertilizer with irrigation to do the job. His yield was 127.08 bu. an acre.

Mr. Sinker planted May 30, and used a mixture of hybrid varieties. His stalk count was 16,000 to 18,000 an acre. He applied 100 lb. to the acre of 10-20-0 fertilizer at planting time, and side dressed the crop with 200 lb. an acre of ammonium nitrate at the first cultivation. He sprayed for weeds June 25.

He irrigated with 10 inches of water from Wolf river between June 24 and July 1, and applied an additional 10 inches of water between July 10 and 20.

Hylen Rush of Troy, Kansas, was second place winner with a yield of 109.91 bu. an acre. He plowed under 300 lb. to the acre of ammonium nitrate and applied 125 lb. to the acre of 8-24-8 with aldrin at planting time.

Seven Goodhue County farmers competing in the official Minnesota X-Tra Yield Corn Contest had their soils tested and then put on fertilizer according to the soil test recommendations. These farmers produced an average increase of 43 bu. per acre.

But, five contestants from that same county who put on fertilizer—not bothering to have their soil tested to see what its needs might be—got a much lower yield increase, an average 24 bushels per acre.

After figuring fertilizer costs, Harold E. Jones, University of Minnesota extension soils specialist in charge of the X-Tra Yield Corn Contest, reports that the average return above fertilizer cost was \$33.76 per acre for those farmers who tested their soil—compared to \$16.31 for those who put on fertilizer without first testing the soil.

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Better Selling

Richer Sales Fields for Dealers

Iowa Retailer Promotes Well-Rounded Fertilizer Business With Direct Mail

Direct mail helps Harry Reed, owner of Reed's Soil Service, Winterset, Iowa, reach many farmers regularly, giving them timely messages on the proper uses of various types of fertilizer. Mr. Reed sells anhydrous ammonia and dry fertilizer and has application service for both.

One of the direct mail pieces which Mr. Reed issued last fall, played up the story of fall application of anhydrous ammonia. The copy went like this:

"Do you farm for profit or do you just farm?"

"1. Make your farming more profitable by applying anhydrous ammonia to increase crop yields and improve your soils.

"2. Put more 'life' into your soil by applying anhydrous ammonia at or before time of plowing down non-legume residue, such as corn stalks, grain stubble or grasses in fall or spring.

"a. For winter wheat apply 40-50 lb. of nitrogen per acre.

"b. For corn following corn apply 60 to 100 lb. of nitrogen per acre.

"c. On sod land to be plowed for corn next spring apply 60 to 100 lb. of nitrogen per acre.

"d. On permanent pasture apply 60 to 100 lb. of nitrogen per acre.

"e. Apple orchards with sod cover apply 60-80 lb. of nitrogen per acre.

"The above rates of nitrogen applications assume that you will employ a mixed fertilizer application program — balanced high nitrogen with adequate phosphorus and potash.

"3. Build up the organic matter in your soil by using anhydrous ammonia to make corn stalks as good a manure as legumes were supposed to be.

"4. Grow more proteins at home with anhydrous ammonia and save on feed bills.

"5. Farm at higher soil fertility levels to cash in on that dividend crop you may have been missing.

"Drop in and see us for further information about anhydrous ammonia for higher yields on richer soils..."

Mr. Reed has storage capacity for 30,000 gallons of anhydrous ammonia at Winterset, and he has one truck and 3 applicators. For applying 60 lb. of nitrogen per acre to soil, the firm gets about \$8.50 to \$9.00 total price.

For spreading dry fertilizer in bulk, the firm gets \$1 per acre for a 200 to 300 lb. spread per acre. By selling both anhydrous ammonia and dry fertilizer, Mr. Reed is able to give the farmers a complete program, keyed to the needs of their soils, with application at the right times of the year.

In addition to using direct mail, which he prepares himself, on his own duplicating machine, Mr. Reed also uses local newspaper advertising quite frequently. Thus he keeps the story of good fertilization constantly before farmers at all months of the year. In this way many orders are booked ahead.

Mr. Reed, who also operates a feed

store at Truro, Iowa, with his brother, Fred, spends considerable time visiting farmers, talking over their fertilizer problems with them. He urges many customers and prospects to have their soils tested well in advance of the season. He handles soil samples, which are sent to a state laboratory for analysis. Thus when the farmer is ready to buy and apply fertilizer, he knows exactly what his land needs and in the proper amounts.

This fertilizer dealer urges farmers to use fertilizer in the amounts recommended based on a soil test, rather than to try to cut down on amounts.

Farm and Home Show Scheduled in Des Moines

DES MOINES—The First Iowa Farm and Home Improvement Show will be sponsored this year by the Iowa Farm and Home Register, the monthly farm magazine published as a part of The Des Moines Sunday Register. The purpose of the show will be to demonstrate new and improved farming techniques, new farm machinery and allied products of all kinds.

Luther Hill, publisher of The Des Moines Register and Tribune, said the project will be held Oct. 10-11, 1956, on the Stanley Eischeid farm adjacent to Bayard, Iowa.

Iowa State College and agencies of both the state and federal agricultural departments will cooperate in

the project. Individual projects will include demonstrations of latest developments in farm machinery, equipment, seeds, chemicals and methods for farm and rural home operation. Field demonstrations to be included will be soil conservation and soil improvement, irrigation, insecticides, pesticides and herbicides, and farmstead modernization.

GROWERS TO MEET

ST. PAUL—The annual Vegetable Growers' Short Course will be held on the University of Minnesota's St. Paul campus Feb. 14. On the morning program will be discussions of safe use of the new insecticides, fertilizers in vegetable production, irrigating vegetable crops and chemical weed control.

Special Notice to DEALERS

Here's a message aimed at helping your business in 1956. With U.S.D.A. approval a reality, the requirements of growers for corn borer granular pesticides will be big. Be ready! Discuss the matter early with the processors who supply you.

the news you've waited for

Best Way to Control Corn Borer

... Granular DDT made with "GRANULAR ATTACKLAY"

With the new, approved Granular DDT method—made even better by the original pioneer carrier, Granular Attacklay—you can be sure the corn borer won't menace your corn profits.

Advantages of Modern Granular Pesticide Method:



SAFETY—Graze stock or make silage after harvest with a new safety never possible with previous control methods.



ECONOMICAL—An application kills corn borers for a much longer period than ever possible before.



EFFECTIVE—Hits the stalk, filters to the whorl, kills the borers at point of greatest danger—where leaf joins stalk.



RECOMMENDED—Fully approved on the basis of large-scale work by U.S.D.A. and the State of Iowa on Iowa corn ground.

Corn Growers With Borers To Kill...

Dealers With Growers To Satisfy...

All specify... Granular Attacklay

Why you should demand Granular Pesticides made with "Granular Attacklay"

Granular Attacklay is the material (carrier) on which the pesticide manufacturer puts the poison. By weight, our carrier is about 95% of the finished product you buy, so quality and dependability are important.

Advantages of "Granular Attacklay"

- Excellent poison release properties
- Uniform particle size distribution
- Almost no drift... goes where it's aimed... no waste
- Doesn't clog applicator... trouble-free to apply
- Larger "pay load" when applying
- No caking in storage
- Produced by a major pioneer supplier of carriers for pest-killing chemicals... dusts, wettable powders, granular soil pesticides, herbicides, fungicides, etc.
- Result of years of painstaking research in our own laboratories and with major formulators.

Valuable Bulletin Available—

A fact-filled bulletin on corn borer control and granular pesticides is just off press. Fill in and mail coupon today for your free copy.



GRANULAR ATTACKLAY is a product from



MINERALS & CHEMICALS CORPORATION OF AMERICA
MENLO PARK, NEW JERSEY

"BUY EARLY"

makes good sense to processor, dealer, grower.

Minerals & Chemicals Corporation of America
1000 Essex Turnpike, Menlo Park, N.J.

Please send me free copy of your bulletin on corn borer control and granular pesticides

name _____

address _____

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(I'm a grower ☐ dealer ☐ processor ☐)

JOINS CORN BELT

EAST LANSING, MICH.—Michigan has now joined the Corn Belt, James R. Bliss, general manager of the Michigan Elevator Exchange told the Farmers' Week group at Michigan State University, recently. Last year, Michigan farmers grew 90 million bushels of corn to rank ninth nationally. Ten years ago the state ranked 16th in production and had to import corn for livestock feed.

ACCEPTING NEW IDEAS

(Continued from page 9)

in Iowa was seven years. Adoption of most other hybrid seeds has come more rapidly. Changes which involve new skills or techniques usually require longer periods of time.

5-Stage Process

However, once an idea has been introduced into a community some people can be found at all stages in the process of acceptance. This is a five-stage process, according to the booklet:

1. Awareness: At this stage the individual learns of the existence of the idea or practice but has little knowledge of it.

2. Interest: At this stage the indi-

vidual develops interest in the idea. He seeks more information about it and considers its general merits.

3. Evaluation: At this stage the individual makes mental application of the idea and weighs its merits for his own situation. He obtains more information about the idea and decides whether or not to try it.

4. Trial: At this stage the individual actually applies the idea or practice—usually on a small scale. He is interested in how to apply the practice; in amounts, time and conditions for application.

5. Adoption: This is the stage of acceptance leading to continued use. An integral part of the acceptance

process is the communication of information at these various stages. Information is communicated through various channels which may be generally classified as follows:

1. Mass communications media (newspapers, magazines, radio, TV and circular letters).

2. Neighbors and friends.

3. Salesmen and commercial dealers.

4. Direct contacts with agricultural agencies (Extension, Soil Conservation Service, Agricultural Conservation Program and Vocational Agriculture workers).

Mass media make their great impact in the awareness and in the interest stages, the report states.

Neighbors and friends are most important as sources of information in the evaluation stage.

In the trial stage agricultural agen-

cies and neighbors and friends are important. Dealers and salesmen are important as sources of information in this stage when commercial products are involved.

In the adoption stage the idea of product has been completely accepted. However, the farmer will still seek information from his neighbors, friends and agricultural agencies. Interest results in relation to his own situation.

Summary

The following is an excerpt from the report's summary:

"The adoption of a new idea follows a sequence of influences from the time an idea is formed until it becomes generally accepted. In the diffusion process people may be classified into types based upon the sequence in which they accept new ideas and practices as follows: innovators, community adoption leaders, local adoption leaders and late adopters.

"One of the functions of leaders among farm people is to diffuse new ideas and practices. It is their task to expedite the process of getting ideas from their sources of origin to those who can use them.

"To be effective in this process one must know what techniques to use at the different stages and how to mobilize them effectively.

"He must also know in which stages in the diffusion process the people are. For example, it would be a waste of energy to devote educational efforts to instruct people how to do something—information pertinent to the trial stage—when the majority of them are at the stage of needing data about what the idea is—i.e., at the interest stage.

"In order to be most effective, an agricultural leader must know how to use all of the communications channels available to him. For example, the informal leaders have contacts and influence with people which no other channels can provide. The most effective use of the informal leader requires that one work with him on an informal basis.

"In order to be effective as an educational worker one must understand:

a. The nature of the acceptance process.

b. The values and aspirations of the people with whom he must work.

c. The formal and informal group relationships within his area.

d. The availability and most appropriate use of mass communications.

e. The sequence and interrelationships of influences in acceptance of new ideas.

"In addition to knowing how to use the various channels of communication in bringing about adoption of practices, educators must be sensitive to the customs, values and aspirations of the people with whom they work. Changes are accepted when they support these values and aspirations. Hence it is important to show how and to what extent they do so. For those most concerned with the security obtained by owning their farms free of debt, one can show how the adoption of improved practices will contribute toward this end.

Finally, the person attempting to speed up the process of acceptance of new ideas and practices must be aware of the total process and the sequence of influence at different points in this process. It is necessary to intermesh the impersonal with the personal and the technical with the nontechnical. In this sense the influencing of change is an art which requires sensitivity to the many phases of the acceptance process; it also requires the ability to make most effective use of the various means of influencing acceptance."



2 new-design PAYLOADER® shovels do the work of 4 previous units

The new-design model HA "PAYLOADER" has already proven that it is the production champion in its class. Long-time "PAYLOADER" users, as well as new owners, report new highs in production and new lows in bulk-material handling costs with the new HA. A typical report is from G. N. Williams, Supt. of Fertilizer Division of Planters Cotton Oil & Fertilizer Co. of Rocky Mount, N. C., who says, "On manufacturing operations two new-design 'PAYLOADER' shovels are doing the job of 4 previous units. These new HA's load faster and easier, travel faster with better operator vision and increased operator safety. On manufacturing operation, these two HA's move about 400 tons under a good day's run on an average haul of 75 feet. We are still operating three older 'PAYLOADER' shovels purchased in 1946."

If you have any bulk materials to scoop-up, carry, load, dump, stockpile or spread, you should find out how the new-design model HA or a larger "PAYLOADER" model can help. There's a Hough Distributor ready to show you.



PAYLOADER®
MANUFACTURED BY
THE FRANK G. HOUGH CO. LIBERTYVILLE, ILL.
SUBSIDIARY—INTERNATIONAL HARVESTER COMPANY



For higher lifts and more capacity the new model HAH 1 cu. yd. capacity

THE FRANK G. HOUGH CO.
970 Sunnyside Ave., Libertyville, Ill.

- ☐ Send data on Model HA (18 cu. ft.)
- ☐ Send data on Model HAH (1 cu. yd.)
- ☐ On larger models up to 2 cu. yd.

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Alert Dealers Will Profit by Making Proper Use of County Agent Releases, Other Material

By AL. P. NELSON
Croplife Special Writer

Does it pay the fertilizer and farm chemical dealer to go through all the newspapers, trade papers, magazines and news releases which reach his desk, and seek material which will help him sell more merchandise and please more customers?

Yes, it does. The dealer who will spend a couple of hours per week at this important job, either during business hours or at home at night, will find that the pay he will get for the time invested will be very, very high.

Also, let the fertilizer dealer not forget to call on his county agent regularly, become acquainted with him and ask him for magazines and news releases which his department issues to farmers. Some of these published items are of tremendous value in giving facts and sales suggestions.

Let us take a look at a report issued by W. D. Rogan, alert county agent of Jefferson County, Wisconsin. In a report, Mr. Rogan has this to say about fertilizer activities in his area:

"Forty eight farmers entered the Pacemakers Corn Club project. This is an increase of 32 from a year earlier. Farmers in this project use a soil test as a basis for applying the necessary fertilizer to grow 100 bu. of corn per acre. Final results show that yields range from 79 to 129 bu. with an average of 103.4 bu.

"Two thousand eighty five soil samples were tested in the county laboratory. The county ASC office cooperated with the program. Recommendations on the use of fertilizers were made by the agent in every case and the results sent to each farmer. The agent completed arrangements to have soil samplers take care of requests in all of the townships.

"On the soil conservation program a statistical report as supplied by the farm planner shows: number of co-operators to date 441; number of co-operators this year 57; terracing one mile; strip cropping 700 acres; ditching 8 miles; tile 60,000 lineal feet."

It can easily be seen from a report of this sort that, although he is not on the payroll of the fertilizer dealer, this county agent, as well as many others, is really a salesman for the fertilizer dealers. When county agents urge that all soils be tested and then fertilized for the specific crops to be grown on those soils, they are setting up an educational program for farmers which is going to help all fertilizer dealers, too.

If your county agent issues reports like this, it will pay you to make a special easel and place the reports on it, circling in red pencil the parts which refer to soil conservation and fertilizer. If the county agent permits you can also post a large picture of him.

Be a good publicity man for the county agent, by posting also a list of the various meetings he is sponsoring in the area each month. Thus you are doing him a good turn and he will be more likely to appreciate what you are doing and reciprocate.

Remember this about a fertilizer article in a magazine or newspaper: if you clip out the article and put it on a bulletin board it will get much more attention than it gets in your area if left in the magazine in subscribers' homes.

This is not to say that these articles are not read when in magazines and newspapers. They usually are, but when you clip and post them in prominent spots, and make striking

signs to call attention to the clipped articles, you get additional readers, and you highlight the contents of the article even for those who read them in the magazine or newspaper.

It may be that as you cull the agricultural college news releases, the magazines and the newspapers which talk about fertilizers, you will get many a display, advertising and sales idea. All you invest is the time, and you can then cash in on the research work which some expert has done. Thus you give yourself the standing of an expert by borrowing the knowledge of the expert, always giving him credit, however, in your ads and reprints.

If you so desire, too, you can make reprints of some of these findings and send them as direct mail to your prospects and customers, urging them to fertilize in the same manner and telling them that you will always be glad to help them get their soils tested.

Also, it is possible to have talks with some of your best customers and get a complete story of their results with the fertilizer you have sold them in the past.

These findings will make an excellent ad story for you, or perhaps even a news story. The tremendous increase in the use of fertilizer and the crop increases gained thereby are big news in many areas of the nation. Take advantage of it.

The 4-H boys are studying the effects of fertilization, too. Do not neglect these members. Often they may have an article or display on fertilization which you can use in an ad or poster or window display. And 4-H members are often very happy to get such recognition.

And most certainly the alert fertilizer dealer needs a scrapbook of published materials about the various kinds of fertilizer and farm chemicals. These should be classified according to sections, and pages tabbed, so that you can find what you are looking for when you want to show the book to prospects and customers.

You can easily make up an effective scrapbook by going through magazines, newspapers and news releases, plus the addition of material from your own files.

There will be many a day when a farmer visiting your store will have the time to sit down and look through such a fertilizer scrapbook. What he will learn in that process will sometimes make such a farmer say, "You're right, Bill. I think I'll buy and use more fertilizer this year."

Leaf-Spot Control a Project for New Season

EAST LANSING, MICH.—Sales of zinc sulfate-lime likely will increase in Michigan next year as the state's peach growers step up their war against the bacterial leaf spot.

Leaf spot was rated as the most serious disease problem during 1955, according to a survey completed by Edward J. Klos, extension plant pathologist at Michigan State University.

In the Southwestern Michigan fruit belt, many growers suffered losses because of leaf spot damage. Mr. Klos says a zinc sulfate-lime spray (8-8-100) repeated every 10-14 days beginning at petal fall is the most effective known control.

Demonstration plots will be set up in infected areas next spring and summer to show the use of control measures and to test some of the promising materials. Emphasis in the demonstrations will be on the proper timing of sprays. Antibiotics will be tested also.

The Bulletin Board

No. 15 in a series from the Spencer Chemical Magazine, "Today's Fertilizer Dealer"



Fertilizer dealer Delmar Van Horn provides customer Herb Robinson (center) with a "swatter" to match the handle which the firm mailed out recently. Partner Meredith Shriver looks on.

"Do-It-Yourself" Angle Helps Convince Customers

Ever hear of a commercial art student and a political science major hooking up to form a successful fertilizer dealership? It happened in Jefferson, Iowa, about eight years ago. Take commercial art, political science, mix well and you're liable to come out with almost anything—in this case it's a bundle of good ideas for selling fertilizer.

The former scholars in question are Meredith Shriver and Delmar Van Horn. They began their thriving partnership in 1947 for a very basic reason—corn farming couldn't keep them busy twelve months a year. (Their farms have since played a big part in the success of their fertilizer business.)

Unusual about the firm is that it started first with fertilizer and then added other lines, instead of vice versa. "That was back in the 'good old days' of the fertilizer business," Delmar says. "But you won't find much evidence of the 'old days' at Shriver-Van Horn—everything's up-to-date there, from the clean, neat office and storerooms to the merchandising methods used to help sell fertilizer, feed and other lines.


Last winter the firm held an open house for about 2000 guests. Refreshments and prizes highlighted the day. Information requested on the registration card included: Number of acres farmed, specific interests in fertilizer and feed, would the customer like to have a free soil sample taken? (Plenty of response from this, and a busy winter it was taking samples.)

Right from the start the partners have been believers in advertising. They started on a small scale by putting up signs in fields where they had done bulk spreading. Today their advertising efforts take in newspapers, fairs, direct mail (first class of course), and plenty of "gimmicks" (like the "swatter", above). Extensive use is made of newspaper ads, including the "mystery farm" photo contest.

But merchandising is only a portion of their sales story. It isn't every firm that can offer the services of a qualified agricultural advisor—but this one can. Elmer Eggiman, former Green County extension director, is one of nine employees. The partners themselves have plenty of farm knowhow, too. Meredith is in partnership with his father on 920 acres. Delmar has a 370-acre farm and manages other acreage. And their farms serve as convincing examples of the value of fertilizer.

For example, an acre test plot on Van Horn land is being used by Lloyd Dumenil of Iowa State College for experiments with buildup after heavy fertilization on continuous corn. The firm also works closely with the farm representatives from both Jefferson banks.

So it's small wonder that when farmers have questions on fertilizer they can feel sure of getting first-hand information from Shriver-Van Horn—they practice what they preach.



SPENCER

Spencer Supplies the Nitrogen

To Fertilizer Dealers ONLY

SPENCER CHEMICAL COMPANY
609 Dwight Building
Kansas City 5, Missouri

Gentlemen: I am a fertilizer dealer not presently receiving Today's Fertilizer Dealer magazine. Please send me a free subscription without obligation.

Name
Firm
Post Office..... State.....

How to Store Fertilizer on the Farm



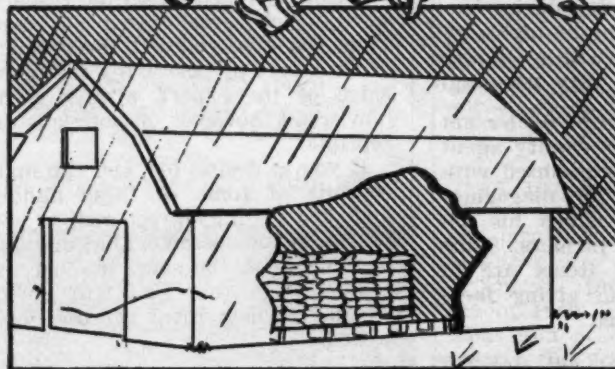
I LIKE THE SOIL!

N.P.K.

Fertilizer applications in the fall are just as good as spring applications under many soil and climatic conditions.



KEEP ME DRY!



Rain and snow soak the bags, and the fertilizer becomes wet. As a result, the bags break, and what's more, the fertilizer drills poorly.



KEEP ME OFF DAMP FLOORS!

N.P.K.

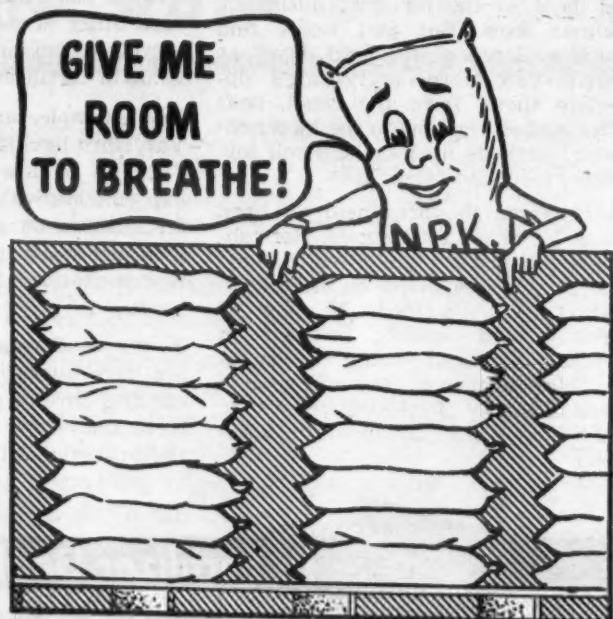
Fertilizer stored on a dirt or concrete floor picks up moisture. As the fertilizer dries out, it may set up and become hard.



NOT OVER 8 BAGS HIGH, PLEASE!

8

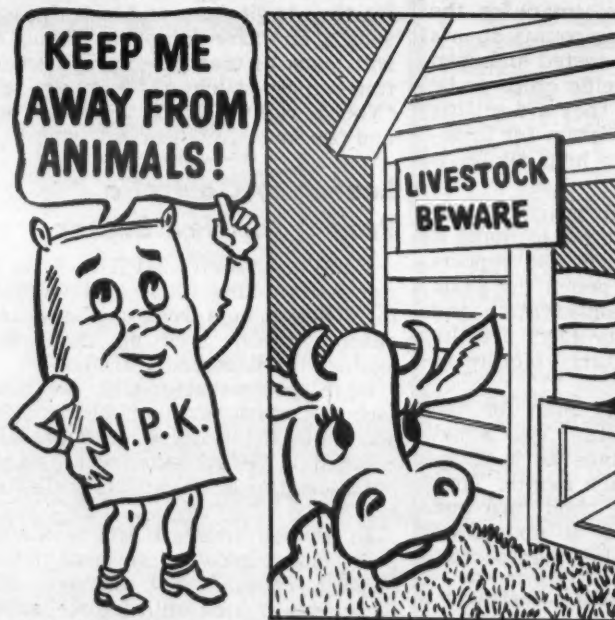
When piled too high, the fertilizer in the bottom bags may also set up. The pressure to the lower bags causes the fertilizer particles to cake together.



GIVE ME ROOM TO BREATHE!

N.P.K.

Good circulation of air helps keep fertilizer stored on the farm in good condition.



KEEP ME AWAY FROM ANIMALS!

N.P.K.

Fertilizer is food for plants—but not for livestock!

MR. DEALER: Here's a page for you to clip out and post on your bulletin board. This informative series of cartoon drawings, issued by the National Plant Food Institute, will be an aid in promoting early fertilizer purchases. Just clip it on the dotted line.

Control Tests With Cattle Get Astounding Results

ST. PAUL—Results of recent tests with a beef cattle fly control system described as "astounding" by University of Minnesota researchers. The tests were conducted at the University's Agricultural Experiment Station, under the supervision of L. Cutkomp, entomologist.

One lot of four beef animals—two steers and two heifers—with treadle sprayers in their pasture gained a total of 451 lb. in 91 days. That's an average 70 lb. more per animal than untreated animals in adjoining pastures. The untreated four gained 171 lb., the treated group 451 lb.—280 pounds more.

In the tests, a sprayed steer or heifer was gaining a little over half a pound a day more than an unsprayed one. This meant about 12¢ gain in beef value for 2¢ cost in spraying, according to Dr. Cutkomp.

This 10¢ a day "profit over spray cost" would mean \$30 more profit for 10 cows in one month or about \$90 for those 10 cows in the summer active months. The most successful spray material used cost a little less than 2¢ per day per animal—a little over \$1.80 for 91 days. With the most successful materials, spraying cost of putting on a pound of gain was slightly over a penny.

The animals had to pass through treadle sprayers on the way to drink and on the way back out to pasture. Counts found an average of 49 horn flies and 25 stable flies on each un-

treated animal. But the best-sprayed lot had less than two horn flies and only five stable flies on each animal.

Treadle sprayer units cost from \$45 up to \$170 and Dr. Cutkomp estimates one would serve a pasture area containing from 50 to 60 steers or heifers.

V. C. Marshall, Texas Conservationist, Honored

LUBBOCK, TEXAS—At the 15th annual convention of the Texas Soil Conservation District Supervisors, a farewell banquet was given in honor of V. C. Marshall, retiring president of the association.

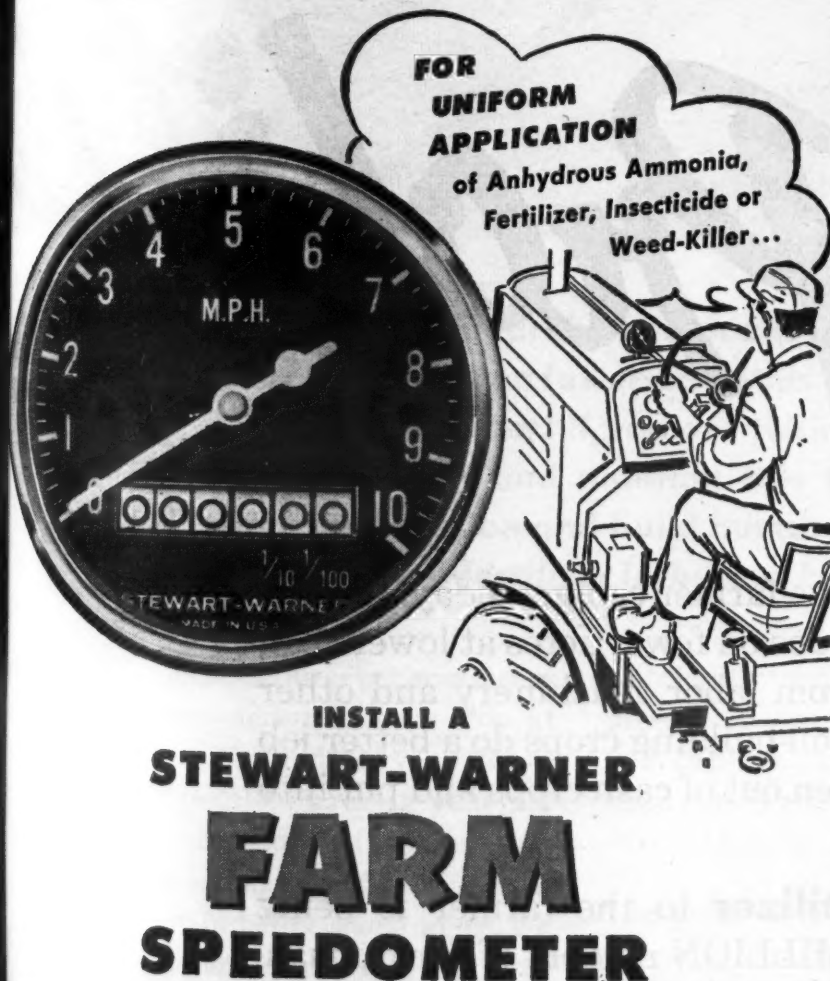
Mr. Marshall is retired from active service after spending more than 20 years as the leading soil conservationist of the state. He helped write the original legislation that set up the beginning of soil conservation districts, and has worked untiringly in a number of positions since then.

At the final meeting, Mr. Marshall's family also came in for part of the praise. With him were his wife and the eight sons, all of whom attended Texas A&M College.

The new president is John Royal of Menard, Texas. The next annual meeting will be held at Tyler, though the exact date has not yet been announced.

NEW SOIL LAB

COLLEGE STATION, TEXAS — Ceremonies marking the formal opening of the new Baylor County Soil Testing Laboratory, located in the City Hall at Seymour, were held Jan. 13. Roy L. McClung, Baylor County agent, is in charge of the lab with Mrs. Mary Boone serving as technician.



**FOR
UNIFORM
APPLICATION**
of Anhydrous Ammonia,
Fertilizer, Insecticide or
Weed-Killer...

**INSTALL A
STEWART-WARNER
FARM
SPEEDOMETER**

Here's how a Stewart-Warner Farm Speedometer can help you save materials and improve crops:

1. Assures uniform distribution by accurately measuring over-the-ground speed and distance traveled. Can be installed on any tractor, fertilizer rig, spray rig, combine or other wheeled equipment.
2. Dial shows speeds up to 10 miles per hour in $\frac{1}{2}$ mile graduations; records distance in hundredths of a mile (52.8 ft.).
3. Indicates instantly when adjustments in throttle setting or material flow are required—to maintain proper coverage.

STEWART-WARNER ADVANTAGES

Easy to Install! Universal mounting—can be used on any vehicle.

Sturdy! Mechanism enclosed in cadmium-plated steel case for protection against dust, rain, weather and shock.

Accurate! Designed and tested to assure true measurement of speed and distance over any type of terrain.

Inexpensive! Pays for itself in one season in material savings.

See your dealer, or write:



STEWART-WARNER

Instrument Division, Dept. CI-26
1840 Diversey Parkway, Chicago 14, Illinois



**Two-Step
Action**
supplies
nitrogen
all
season

CSC
**AMMONIUM
NITRATE
FERTILIZER**
GUARANTEED ANALYSIS
33.5% Nitrogen



Step 1

QUICK-GROWTH Half of the nitrogen immediately available for rapid early growth



Step 2

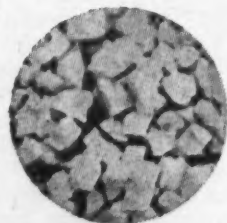
SUSTAINED GROWTH Half of the nitrogen available more slowly for continued growth

CSC Ammonium Nitrate Fertilizer is guaranteed to contain a minimum of 33.5% nitrogen. And because this 33.5% nitrogen consists of quick-growth nitrate nitrogen and sustained growth ammonia nitrogen, two-step action is possible.

CSC Ammonium Nitrate Fertilizer is shown here in its exclusive actual size. It flows freely, spreads evenly, never clogs or sticks in the spreader. Low-moisture CSC Ammonium Nitrate is specially coated to prevent caking or lumping and packed in sturdy bags to insure continued good condition during storage.

Spend your fertilizer dollar wisely — ask for CSC's green and white bag the next time you buy fertilizer.

A Product of
COMMERCIAL SOLVENTS CORP.



NITROGEN THE HEART OF THE HARVEST

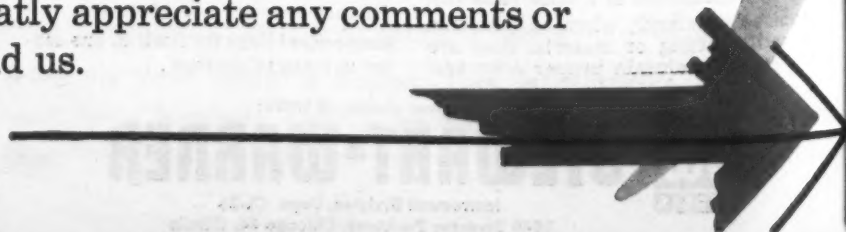
Again we tell
3½ million farmers

Fertilizer Grows Farm Profits

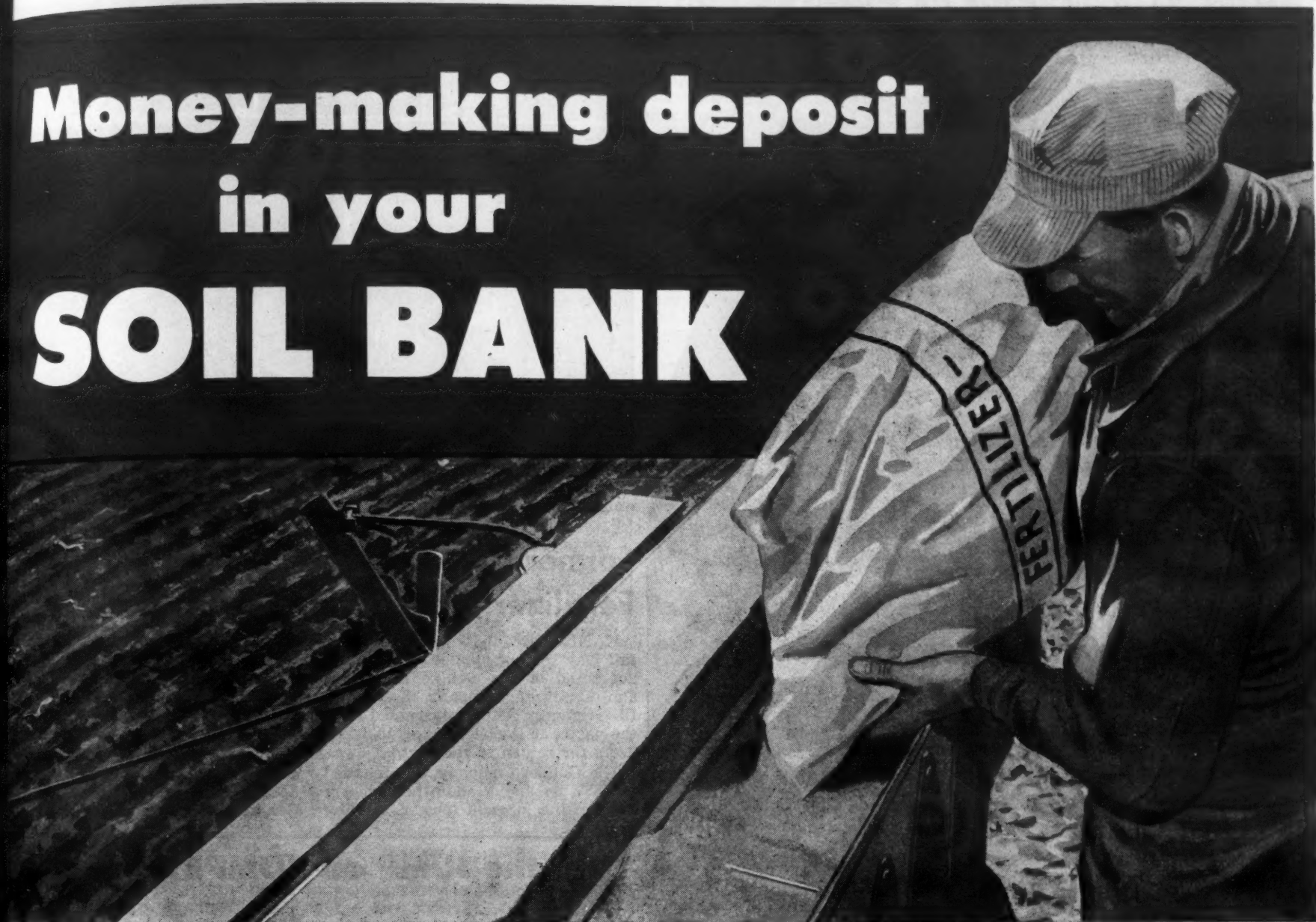
Fertilizer is the best help the farmer can get today. It helps him grow bigger yields of cash crops on fewer acres at lower cost, thus assuring a greater return from labor, machinery and other fixed expenses. It also helps his soil-building crops do a better job of soil improvement on acres taken out of cash crops and put into acreage reserve.

The importance of fertilizer to the farmer is being brought to the attention of 3½ MILLION readers of farm magazines by a powerful and continuing campaign conducted by Nitrogen Division, Allied Chemical & Dye Corporation.

Shown on the opposite page is one in a series of big, full-page advertisements appearing in farm magazines. Others have preceded it and more will follow. We trust that this campaign is helpful to you and we will greatly appreciate any comments or suggestions you may wish to send us.



Money-making deposit in your SOIL BANK



If you are faced with the problem of making a profit out of growing your cash crops on fewer acres this year — fertilizer is the best help you can get! If you are taking part of your land out of production and planting this to soil-building crops that prevent erosion and build humus and fertility in the soil for future use — fertilizer is the best help you can get!

On cash crops, more fertilizer per acre means more yield per acre added to your crop at very low extra cost. This reduces your cost of production and greatly increases your net profit. The extra yields added by more fertilizer are the lowest cost and most profitable share of your crop. You are in better shape to make a good profit despite low crop prices and other conditions beyond your control.

On reserve acreage, fertilizer will help your legumes, grass and other soil-building crops do a far better job of soil improvement. Fertilizer produces a better stand with less seed and encourages vigorous root and top growth that

adds fertility and organic matter to the soil and prevents erosion. Even windbreaks grow better with fertilizer. Fertilizer helps forest trees grow more rapidly and produce better yields of pulpwood and timber at an earlier date.

The price of fertilizer has not gone up like the prices of many other things you buy. Fertilizer is the most profitable investment you can make in growing cash crops! It's the best-paying deposit in your soil bank!

The fertilizer industry serves the farmer. Nitrogen Division serves the fertilizer industry as America's leading supplier of nitrogen for use in mixed fertilizers.

See Your County Agent

Ask your County Agent to recommend the analyses and the amounts of fertilizers best suited for your crops and soils. His advice to you is based on the latest official recommendations from your Extension Service and Experiment Station.



See Your Banker

Bankers are alert to good investments. They know that fertilizer pays a big return in bigger yields of better quality crops. If you need money to buy more fertilizer, talk it over with your banker.

See Your Dealer

Your fertilizer dealer can supply you with a good brand of fertilizer in the amounts and analyses as recommended by your County Agent. Help your dealer to get your fertilizer to you on time by placing your order early and accepting prompt delivery. It pays to have your fertilizer on hand when you need it. Remember, fertilizer grows farm profits. *Make sure you use enough this year!*



NITROGEN DIVISION Allied Chemical & Dye Corporation
New York 6, N. Y. • Columbia 1, S. C. • St. Paul 4, Minn.
Hopewell, Va. • Ironton, Ohio • Omaha 7, Neb. • Columbia, Mo.
Indianapolis 20, Ind. • Atlanta 3, Ga. • Kalamazoo, Mich.

Fertilizer Grows Farm Profits

*For Every Type Crop or Soil...
Any Size Tractor or Farm...*



DEMPSTER
Liquijector

Liquid Fertilizer
Applicators

**Do a Better Job
at Any Season!**

If you're still wondering whether the proven benefits of Anhydrous Ammonia or high-nitrogen solutions are practical, economical and profitable on your farm—you should know more about Dempster Liquijectors.* Highest in accuracy and efficiency of application, the complete Dempster Liquijector line of applicators is designed to meet any farm conditions—type of soil, acreage, row crop, field crop or pastures . . . large or light tractor power . . . NH_4 or solutions. Moreover, with most Liquijector models you can combine the application with your other operations—plowing, tilling, planting or cultivating . . . saving time, man power and tractor power.



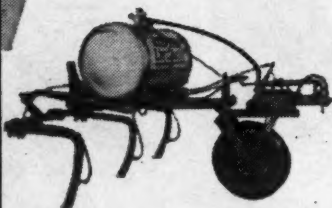
*Write for the new Dempster Liquijector Book—complete details and illustrations.

Dempster Liquijectors Type S for Solutions available with capacities to 300 gallons.

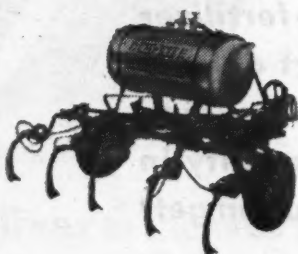
DEMPSTER MILL MFG. CO.

Beatrice, Nebraska

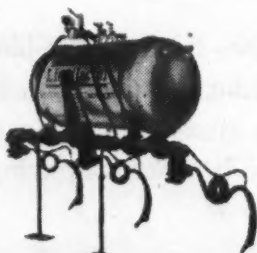
New Dempster 3-point hitch hydraulic lift Liquijector, equipped with super-accurate, easy to use Dempster Liquijector pump. Will permit use of large variety of 3-point hitch tools in combination with application.



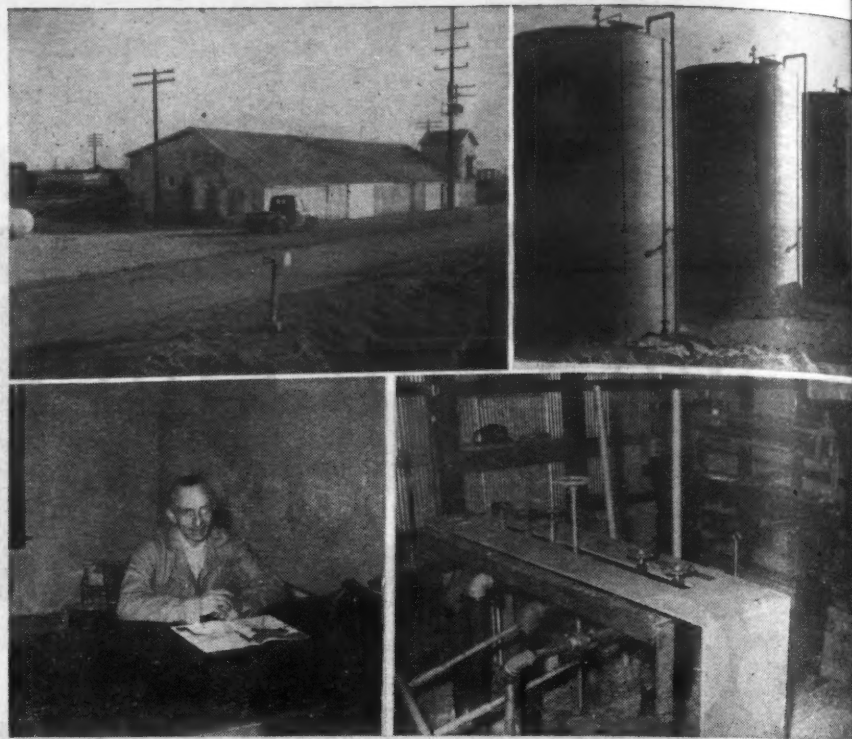
Semi-Mounted Liquijector, with Dempster Liquijector pump or flow control valve—perfectly balanced, highly maneuverable, accurate and economical. Plow, plant, till as you fertilize.



Dempster 107-1 Liquijector, mounted on famous Dempster 100 Tool Carrier—use Liquijector pump or flow control valve system; mechanical power or hydraulic lift.



Quickly mounted Dempster D-100 and D-60 Liquijectors, with flow control valve, for smaller acreage and low cost.



FROM COAL TO FERTILIZER—Shown above are views of Gohlke Phosphate and Fertilizer Co., Kankakee, Ill., originally a coal dealer but now in the dry and liquid fertilizer business. Upper left, exterior view of new plant; and at the right, three 5,300-gal. neutral solution storage tanks. Below, left, is Arthur Gohlke at his desk in the office located in a separate building that houses the weigh beam and operator's control panel seen at lower right.

Former Coal Dealer Casts His Lot With Fertilizer Industry and Finds It Pays

KANKAKEE, ILL.—“Turn about is fair play” can be applied to the product trend of the Gohlke Phosphate and Fertilizer Company, Kankakee, Ill. Originally selling coal mined from the earth, it is now dealing in fertilizers for return to the earth.

The Gohlke Company was founded in 1887 by the grandfather of Art Gohlke the present owner. Selling

coal for heating and cooking was a big business until a few years ago when competition from gas and petroleum products made it necessary for the company to seek a new field.

After much consideration, Mr. Gohlke decided to enter the fertilizer sales field. Located in a good farming area of rich soil, mostly tillable, Mr. Gohlke's investigation showed that

Get the JUMP on COMPETITION...



through PRIVATE LABELS!

If you hope to keep several big “hops” ahead of your competition and to make sure that you “pocket” those important repeat orders, then it's high time you discovered the magic of packing your products under your private labels which will capitalize on your established name in your market!

If you are “fed up” with competing with everyone selling the same lines you are selling in your territory . . . if you are tired of seeing repeat orders sneak off to

competition . . . then you are ready to consider private labels!

Through private labeling you are assured an exclusive on your high quality line in your market . . . Your customers can't reorder from anyone but YOU!

PRIVATE BRANDS, INC., is ready with a complete service to help you “get the jump” on competition in your market. It will pay you to investigate today!

Write, Wire, Phone for Particulars



PRIVATE BRANDS, INC.

300 S. THIRD-CL-2-KANSAS CITY, KANSAS

constant cropping over many years led to a depletion of soil nutrients necessary to high productivity. Starting with the sale of phosphate, Mr. Gohlke found that while sales were brisk, the farmers wanted a complete fertilizer that would supply all the necessary nutrients.

After a wide study of various products and processes, Mr. Gohlke purchased, in the spring of 1955, a "package plant" for manufacturing liquid and dry-mixed fertilizers. The plant was bought from Midstate Machinery Company, Decatur, Ill., and was erected and installed by them. It was placed in operation last fall. Capacity of the plant is 15 tons of liquid mixed-fertilizer and 15 tons of dry mixed-fertilizer per hour.

Housed in a 45'x130' building, the liquid mix plant is at one end and the dry mix plant in the other end of the structure. In the center portion of the building, accessible to both units, are six 100 ton bins for storing dry ingredients used in both operations. Stored products include ammonium phosphate, triple super phosphate (45%), potash, urea, and raw rock phosphate. Openings in the bins allow tractor with power scoop to drive in, load and drive out to dump in hoppers for either unit. Unloading facilities allow for unloading railroad cars directly into the bins.

Additional equipment for the liquid mix unit are three 5,300 gallon neutral solution storage tanks; a 5,300 gallon rubber-lined storage tank for phosphoric acid and three 1,000 gallon nitrogen storage tanks.

The arrangement of hoppers and tanks allows the entire manufacturing and loading out process to be handled from a control panel, operated by one man. Ingredients are added by weight in the reactor tank, with the scale beam located at the control panel.

Mr. Gohlke says that his plant has sufficient capacity to supply the farms located within a 25-mile radius, and its capacity will also enable him to supply dry mixed-fertilizer on a "while you wait" basis. The storage capacity for liquids will allow sufficient reserves to care for all needs during the rush season, he says.

The Nitrogen Division of Allied Chemical & Dye Corp. expects to erect a 25,000 gallon storage tank for 2% nitrogen adjacent to the Gohlke plant. Contents of this tank can be transferred directly to supply tanks at the plant.

Mr. Gohlke says he will sell the fertilizer spread on the fields with trucks or the farmer can rent a sprayer and spread it himself. The rental units are 300 gallon tanks with sprayer, mounted on skids which can be used on a pickup, truck or farm wagon.

Farmers of the area have expressed much interest, and demand for spring delivery of all types of fertilizer has been heavy. Mr. Gohlke reports. A salesman has been employed to make direct contacts with farmers, and advertising aids supplied by the Midstate Machinery Company, consisting of newspaper mats, radio scripts and direct mail pieces, are also being used.

Colorado House Votes Copper Control Funds

DENVER—The Colorado House of Representatives has voted a state appropriation of \$150,000 to fight a grasshopper infestation in eastern and south central Colorado. Rep. K. Burchfield of Walsh told his colleagues that an estimated 600,000 acres in Las Animas and Baca counties are affected and that other grass-stricken eastern Colorado counties will suffer next spring unless prompt action is taken.

Ohio Farm Supply Firm Boosts Sales With Paper Published for Customers

By AL. P. NELSON
Croplife Special Writer

Fertilizer, insecticides, sprayers and other farm items get excellent advertising in the Medina Trading Post, a newspaper published twice a month by the Medina Farmers Exchange, Inc., Medina, Ohio. The firm also has a branch at Attica, Ohio.

The Medina Trading Post is a full fledged newspaper, now in its tenth year of publication. Fred and Albert Snyder, managers of this progressive feed, fertilizer, farm appliance, farm machinery and automotive firm, credit the newspaper with a lot of their sales which top \$2,000,000 in Medina and about \$750,000 at Attica, Ohio.

The Snyders say that the newspaper project costs them about \$6,000 per year, including postage, and that 11,000 are printed every two weeks, with about 10,000 being sent to rural boxholders. Farmers in the area have become so accustomed to receiving the newspaper that they begin to inquire whenever it happens to be a few days late.

There are a number of editorial features which Raymond Folk, editor, uses to make the publication interesting, and help the firm sell 2,500 tons of fertilizer and many tons of feed and other supplies every year.

One of these features is the printing of fertilizer and feed facts on the front page of the paper regularly. The type is large and readable.

Another feature is the printing of at least one rural picture with a local tieup on the front page of each issue. Such a picture may deal with the achievement of the 4-H, or the FFA, or the Homemakers, the Soil Conservation Club, or it may deal with a successful dairy herd, or poultry flock, usually with the owner in on the picture.

In other words these pictures tell readers something about the problems and the progress of the rural area, and customers like to read about it.

For example one front page picture used in the Medina Trading Post showed a number of conservation minded people riding on trucks during the Conservation Open House sponsored by the Medina County Conservation Committee in cooperation with the county extension and soil conservation offices. These people went on tour of various farms in the area which had adopted soil conservation practices, including better fertilization in many instances.

Pictures and stories like this do much to increase reader interest and to publicize better farming practices. And the Snyders and other officers of the Medina Farmers Exchange, Inc. reason that the better a farmer becomes, the better customer he will be.

The editor usually publishes a column each issue, too, in which he deals with some pasture, lawn, garden or other problem. In this column he tells customers what fertilizers will do to improve crop yields. He also writes understandably about weed and garden spray problems, so that many customers come in and buy the chemicals he recommends for better garden success.

Another interesting column in the Medina Trading Post is written by O. C. Duke, well known in the area. One piece of copy in a recent column of his was excellent publicity for fertilizer. It said:

"Last week, Mr. House, Medina County soil planner, and I were on a farm where the farmer had applied

300 lb. of fertilizer after the first cutting and he, as well as we, were amazed at the growth of this meadow since then. He is firmly convinced that top dressing pays on old as well as on new meadows."

But perhaps the biggest reader drawing card in the Medina Trading Post are the more than two hundred free want ads which appear on up to three of this periodical's four pages each issue. These items, turned in by farmers are for items they have for sale, for trade, or items which they want to buy. The ads also contain free announcements of farm social and church affairs.

Better Selling

Richer Sales Fields for Dealers

Last year when the firm celebrated its 50th year in business, it printed a special issue in which an article detailed the history of the company and its many departments since 1904, the founding date. There are 50 employees at Medina at the present, and 14 at Attica.

There are also four route salesmen at Medina who get orders for feeds, fertilizers and farm supplies, covering certain areas twice a month. At Attica there are two route salesmen and one special farm machinery salesman. There are two farm machinery salesmen at Medina and also a special implement repair shop. The firm also sells and services automobiles.

Several years ago a new front was added to the main building at Medina, giving the company a modern, visual front.

... Where
Highest Quality
Urea Nitrogen
Is Made

VITREA

Order VITREA and get...

- John Deere "all purpose" 45% nitrogen... the best money can buy... at competitive prices.
- In 80 pound bags or in bulk, coated or uncoated.
- Ideal for direct application and liquid or dry mixing.
- Fast, dependable service.

For Vitrea or Anhydrous Ammonia write or phone now!



Grand River Chemical Division of
DEERE & COMPANY

2010 SOUTH UTICA

TULSA, OKLAHOMA



When Pat McGillicuddy came to work one morning, his rotund balding and frugal partner was at his desk already busily figuring discounts and checking delinquent accounts. In the eight years the two men had been in business, Pat had never beaten Oscar to work in the morning. One of Oscar's points of pride was that he got to work before time, never on time.

Now, when tall, lanky, blue-eyed Pat took off his storm coat, hat and rubbers and sat down at his desk, he saw a number of clipped items, etc. which someone had put on his desk. One was a newspaper clipping that said that farm income was down 20% over 1950, that hog income was quite low. Another clipping told about a group of farmers holding a meeting to protest low farm prices, while the price of things they bought kept rising.

Another clipping told of a certain corporation that made 2% less return this year than last. One clipping told of a company that suffered a loss for the first time in 10 years. Still another story in a newspaper told of government controls to hold down inflation.

Parts of the clippings were circled with a red crayon mark, as though someone intended Pat should pay especial attention to those paragraphs.

Pat studied some of the clippings. There was not a word of joy, of hope or encouragement in any of them.

"Oscar," said Pat, "who put these clippings on my desk?" Pat knew who had done it, but he wouldn't admit it.

"I did," replied Oscar, laying down his pencil and turning a stern, sober face toward his Irish partner. "I think it is time that we look conditions straight in the face. These good times can't keep up forever. Those

experts say so. It is time to cut down on expenses, pull our horns in as far as we can and sit tight with what we have. That way we can coast along for a long time."

"So that's it?" commented Pat slowly. "You've picked out all the bad news you could find and put it on my desk. If I were to believe all this calamity, I would just say to myself, 'what the heck is the use of working hard? Conditions are too tough'."

"Well, it's true, the stuff in those clippings," challenged Oscar.

"I don't believe all of it is, Oscar. Yes, farm prices are down, some of them, especially hogs. But milk and egg prices are up over last year. The farmers are not going out of business. Many are going to stick at it, manage better, and they'll make some profit. And when they stay at farming they are still going to need fertilizer and other farm supplies more or less."

"They will need some," Oscar said, "but will they pay for them? That is a horse of a different color. And I don't like that color."

"So you think we will have a bad year, eh?"

"I don't know," Oscar said stubbornly, "but the signs are bad. We should buy less, much less, and feel our way. All those salesmen are coming here this week. I don't want you to think you are the head of General Motors, ah, and go buy everything they tell you about."

"That's it," Pat said grimly. "You knew a lot of salesmen would call this week, and so you put these clippings on my desk as a hint that I go slow."

"Well, what's wrong with that?"

Pat was thoughtful, even though his face was a little red. "Oscar, how many times have I told you that I don't overbuy? I have a definite buy-

ing policy. I buy not to save money but I buy to sell."

"And sometimes we don't sell what you buy," Oscar said bluntly. "Then we have to have sales."

"Every merchant has some sleeper stock. We can't be the exception. But the more capital we invest in stock the farmers want—within reason, of course—the more chance we have of making a sale and a profit."

"Huh," grunted Oscar disdainfully. He pointed in the direction of the town's only bank. "I would rather see more of our money down in the bank, where it's safe, than on our shelves gathering dust, let me tell you."

Tillie Mason, the ulcer inclined bookkeeper, who had gradually been getting more nervous as the argument went on, got up and went to the washroom where she swallowed an ulcer powder.

Pat shook his head. "Oscar, you just don't see the point. We are in business to please customers, and if we haven't got the stock they want, we won't make a sale, and thus we won't make any profit, begorra. If it wasn't for our good customers we would go out of business."

"Ach, that is not so!" Oscar thundered. "We have a good store and plenty of stock. We sell just as cheap as anybody else. The farmer knows we got what he needs and he must pay for it if he gets it. We run the store; he doesn't. And if I didn't run the cash department, we wouldn't be running a store at all!"

"Oh, is that so?" Pat retorted. "Someday you are going to wake up, Oscar, and learn that if it weren't for sales and advertising, there wouldn't be enough money coming in so that you could sit at your desk figuring discounts and saving paper clips. Did you ever think of that?"

"Well, I don't believe in giving stuff

away and losing money on bad accounts," snapped Oscar. "I don't cheat a man. I'm honest. I give him what he's got coming for his money and no more. Why should I? If I didn't I wouldn't be making a profit."

This argument would have gone on for hours, but it so happened that at this moment, the door opened and in stepped Pete Walker, salesman for the Smith Co.

"I don't care what you say," Oscar continued loudly, apparently for the salesman's benefit. "The way things are I think we should go easy on buying." And with that he turned his desk work.

Pat winked at Pete Smith, and said, "Hello, Pete. Sit down. Better show us where we can make a lot of cash sales quickly by buying some of your products. It's the trend of the times—economy." And he winked again.

Oscar did not see his partner wink. He was too busy with his paper work. But hearing Pat's words and believing them, a smile of self-satisfaction spread at the corners of his usual tight mouth. Somehow it seemed to be such a lovely day, he thought.

82 Bu. Extra Yield Cops First Prize in Minnesota Corn Contest

ST. PAUL—Ambrose Lewandowski, Winsted, Minn. has been named winner of the Minnesota Official X-tra Yield Corn Contest with an 82.8 bu. per acre "X-tra yield" over an unfertilized "check" plot that gave 40 bu. His "X-tra yield" plot made 123 bu. per acre.

A yield of 179.6 bu. per acre, record high for the contest since it began in 1953, won another farmer, Walter S. Nelson, Atwater, the "high yield" section. His check plot gave 127.6 bu. per acre.

In announcing the winners, Harold E. Jones, University of Minnesota extension specialist, said that since the contest began in 1953 the total yield has risen about 20 bu. a year.

The contest is conducted by the University of Minnesota Agricultural Extension Service and The Farmer magazine of St. Paul.

POTATO AVERAGE

COLUMBIA, S.C.—Early commercial potato planting in South Carolina will total about 6,000 acres, an 8% decrease from last year and 32% below the 1945-54 average, the Federal-State Crop Reporting Service reports.



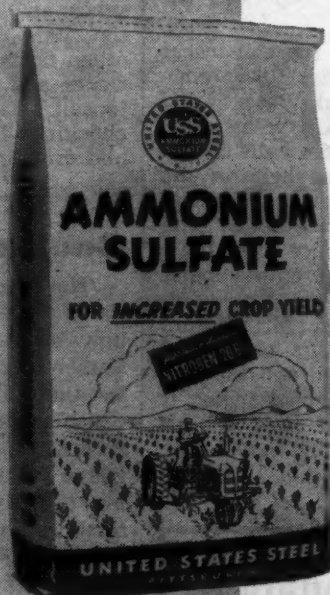
AT NORTH DAKOTA MEETING—Above are scenes at the recent seventh annual fertilizer conference for dealers, held at North Dakota Agricultural College, Fargo, N.D. In the left picture, from left to right, are, front row, E. C. Wambolt, Clay County Farm Bureau, Moorhead, Minn.; C. G. Brandsted, Farmers Elevator, Arthur; Alvin Nelson, Farmers Elevator, Arthur, and R. B. Widdifield, North Dakota Extension Service agronomist, Fargo; back row, O. W. Poole, F. H. Peavey & Co., Moorhead, Minn.; Louis Gillin, Farmers Elevator, Addison; Glen Holt, Armour Fertilizer Division, Breckenridge, Minn.; Jens Bale, Land O'Lakes Creameries, Fargo, and Walter Ness, Trall



county agent, Hillsboro. In the photo at the right are, front row, Les Iversen, E. S. Gandrud Co., Owatonna, Minn.; George Roberts, F. H. Peavey & Co., Leonard; J. H. Wires, Virginia-Carolina Chemical Corp., St. Cloud, Minn.; Walt J. Langley, Jr., McCabe Bros., Minneapolis, and Jim Loudon, Armour Co., Minneapolis; back row, J. H. Olson, F. H. Peavey & Co., Alice; E. Peterson, Peterson-Biddick Co., Alexandria, Minn.; Warren Olson, Osborn McMillan Elevator Co., Minneapolis, and A. T. Slough, F. H. Peavey & Co., Halstad, Minn. A story of the conference appears on page 6 of the Dec. 1955 Croplife.

GET SET for top dress time!

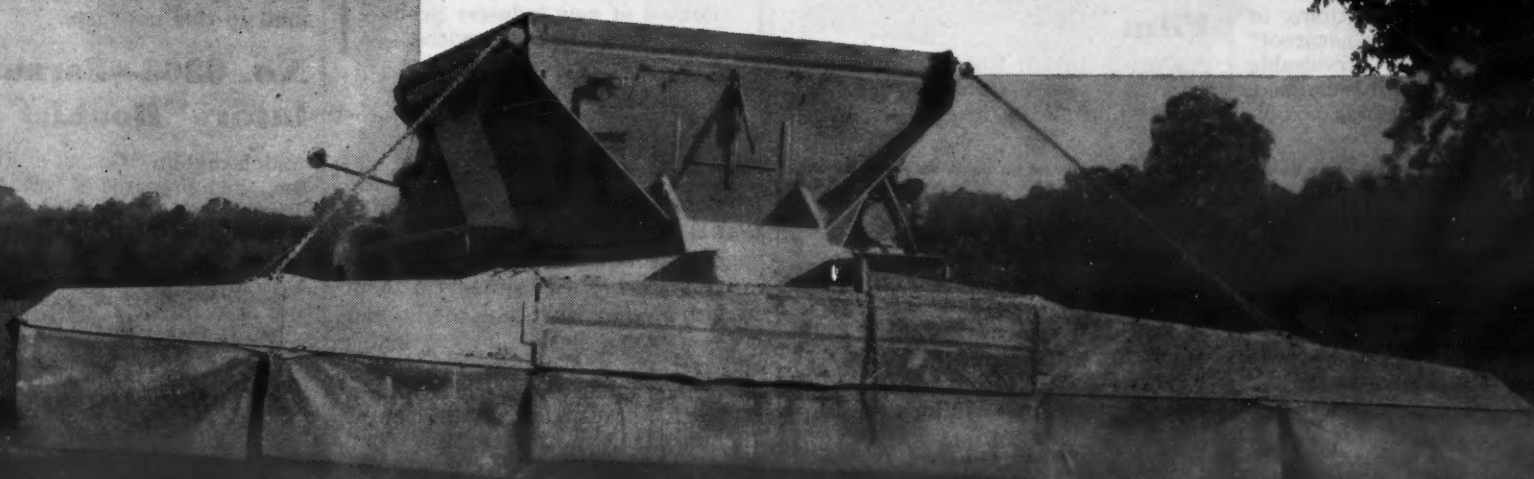
Order USS Ammonium Sulfate



Any farmer is interested in having his small grains yield extra bushels and in having grass pastures ready for grazing ten days to two weeks earlier than usual. That's why so many farmers use USS Ammonium Sulfate when they top-dress early in the Spring.

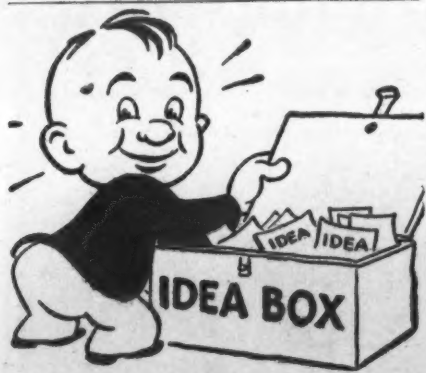
USS Ammonium Sulfate supplies NITROGEN in ammonia form. . . . By top-dressing within the next few weeks, farmers will know that when the growing season begins, the nitrogen in USS Ammonium Sulfate goes to work, encouraging an earlier start for their crops. And that's not its only benefit. Crops treated with ammonium sulfate have faster growth . . . make better use of all available water throughout the season . . . and have a higher protein content.

USS Ammonium Sulfate is ideal for application in mixes or straight. It's dry, free-flowing, easily applied with normal equipment, and it's available in bulk or bags. Be ready for the Spring rush . . . order your supply of USS Ammonium Sulfate, today!



USS Ammonium Sulfate





What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6370—Products Catalog

The Wil-Kil Pest Control Co. has produced a catalog describing its service, chemicals and equipment. Sections of the catalog are devoted to livestock insecticides, municipal insecticides and related chemicals, fumigants, weed and brush control products, wood preservatives, food plant insecticides and spraying equipment. Prices and shipping information is also available. Secure the literature by checking No. 6370 on the coupon and mailing it to Croplife.

No. 6371—Duster Package

"Whiff'n poof" describes the action, appearance and the sound of a new squeeze duster package for Du Pont garden dusts. The Du Pont spokesmen said one squeeze of the flexible package sends a puff of dust far into a mass of foliage. Four of the company's garden dusts will be packaged in the package during the coming year. The new 8-oz. package is a cylinder of "Alathon" polyethylene resin, fitted with a directional nozzle to send the dust where it is aimed. Labels, lids and bottoms of the package are all "weatherproof" to keep the package serviceable through repeated re-fills, it is claimed. Du Pont insecticide-fungicide combi-

nations to be available in the new container are rose insecticide and fungicide, floral dust, vegetable garden dust and tomato dust. Secure more complete details by checking No. 6371 on the coupon and mail it to this publication.

No. 5376—Draft Curtain

The Bemis Bro. Bag Co. has complete information available on its retractable curtain, called TransWall, for plants, warehouses, etc., to shield doorways during cold weather. The curtain slides readily out of the way for free use of floor space, the manufacturer states. Other features claimed are: It is built of a heavily coated fabric and installs easily on a single overhead track. Nylon rollers permit instant retractability. Little space is used when retracted. For example, a curtain 20 feet wide retracts to only 2 ft. TransWall is available in custom sizes to suit individual needs. Complete information may be obtained by checking No. 5376 on the coupon and mailing it to this publication.

No. 6372—Soil Insect Film

"Corn's Hidden Enemies," the film story of one corn farmer's successful fight against soil insects, is being

reissued free of charge to county agents and other farm leaders by the Shell Chemical Corp.

The film deals with the soil insect problems of a Danville, Iowa, corn farmer named Howard Waters, and the measures he took to save his crop. In the movie, Mr. Waters calls on the local county agent for help in his fight against the underground pests which are ravaging his fields. The agent, in turn, asks advice from Iowa State College where entomologist John H. Lilly suggests that a chemical insecticide be used. Mr. Waters follows the entomologist's advice and applies aldrin to his soil and the film shows the results. When ordering, it is recommended that at least one alternate delivery date be listed. The film has a running time of 12 min.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6366—Water Conditioner

The Packard Manufacturing Co. is marketing a new water conditioner that is claimed to eliminate and prevent scale and corrosion formations in boilers and water systems without the use of chemicals. The conditioner is for use on boilers, air conditioning and refrigerating systems and other industrial applications where water problems exist. The conditioner is manufactured in sizes handling from 6.5 to 1,760 gallons per minute for connection with corresponding standard iron pipe sizes ranging from ¾ in. to 12 in. Larger sizes are also available. Secure more complete information by checking No. 6366 on the coupon and mailing it.

No. 6369—Termite Control

The Shell Chemical Corp. has prepared a new four-page booklet entitled "Termite Control with Dieldrin." It tells how to detect termites and, in a series of illustrations, shows how pest control operators control them with dieldrin. Three types of buildings are considered: Those with crawl space between the floor and the ground, those with a concrete floor flush against the ground and those with basements. Dosage rates per square foot are also explained. The booklet includes a brief history of the pests, their social organization, and the extent of their yearly damage. One section deals with the resemblance of termites to "white ants" and gives hints on distinguishing between them. The use of dieldrin as a protection against termites in

the soil is brought out in the final section of the booklet. Secure your copy by checking No. 6369 on the coupon and mailing it to Croplife.

No. 5380—Booklet on Salesmen

How the modern salesman works, what he does, and why, is portrayed in a 32-page booklet entitled "The Salesman Story" published by the Du Pont Company. It illustrates the vital function performed by the nation's five million salesmen and the vast sales effort that employs, directly or indirectly, perhaps 15 million men and women. It relates how the old time drummer passed out of the scene to make way for men who, by their selling, create new industries and new products that raise the standard of living for all. "The modern industrial salesman is a professional. Glad-handing and back-slapping are not his basic attributes," the documented booklet reports. The "new kind of salesman" must often be part scientist, part economist, or specialist in other fields. "He is mature, in experience and know-how, before he tries to sell." The booklet is available by checking No. 5380 on the coupon and dropping it in the mail.

No. 5379—Tax Booklet

"How to Save Money on Your Farm Income Tax" is the title of a new booklet prepared by the J. K. Lasser Tax Institute and offered free by the Nitrogen Division of Allied Chemical & Dye Corp. The booklet is written in clear, every day language to enable the farmer to grasp his tax deduction situation with a minimum of reading. Among subjects covered are: How to compute your farm income, forms to use, farmer's self employment income, declarations for farmers and crop damage payments. One section is entitled "Special Tax Saving Check List for Farmers." A free copy of the booklet may be secured by checking No. 5379 on the coupon and dropping it in the mail to this newspaper.

No. 6363—Formulators' Booklet

McLaughlin Gormley King Co., Inc., has prepared a booklet on the firm's product, Dry Pyroicide, a pyrethrum concentrate. The booklet is entitled Non Toxic and Low Residue Agricultural Insecticide Concentrates and is available at no charge to agricultural insecticide formulators. The booklet states that dusts made from the firm's product are safe to use right up to the time of harvest. Information in the booklet includes sections on storage and handling Dry Pyroicide, diluents or carriers, compatible insecticides or fungicides, mixing machinery, packing and storage of the product, labeling, registration strengths and dosages and commercial applications. Information for manufacturers on the firm's product P-M Dust Concentrate, is also included. Formulators may check No. 6363 on the coupon and mail it to secure the booklet.

No. 5369—Seed Treater

A new automatic 150 bu.-per-hour liquid seed treater has been announced by Panogen, Inc. Smallest of the Panogen treaters, the new model JS-100 is said to offer the same "push button operation" and other features formerly available only in the firm's larger-capacity models. The electric motor, wire cord and plug are standard equipment. For non-stop treating of wheat, oats, barley, flax, rye, and similar seed, the liquid seed disinfectant can be delivered by connection hoses directly from the shipping container. Since the pump will deliver the liquid up to a 50-ft. height

Send me information on the items marked:

- | | |
|--|---|
| <input type="checkbox"/> No. 5369—Seed Treater | <input type="checkbox"/> No. 6366—Water Conditioner |
| <input type="checkbox"/> No. 5376—Draft Curtain | <input type="checkbox"/> No. 6367—Movie |
| <input type="checkbox"/> No. 5379—Tax Booklet | <input type="checkbox"/> No. 6368—Containers |
| <input type="checkbox"/> No. 5380—Booklet | <input type="checkbox"/> No. 6369—Termite Control |
| <input type="checkbox"/> No. 6362—Moisture Indicator | <input type="checkbox"/> No. 6370—Products Catalog |
| <input type="checkbox"/> No. 6363—Formulators' Booklet | <input type="checkbox"/> No. 6371—Duster Package |
| <input type="checkbox"/> No. 6364—Catalog | <input type="checkbox"/> No. 6372—Soil Insect Film |

NAME

COMPANY

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CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

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(Sec. 349,
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is even possible to keep the drum inside (the liquid doesn't freeze) in a remote part of the building, is claimed. The liquid may also be applied from the drum by gravity or from an inverted bottle fitted to the top of the treater. Secure more complete details by checking No. 5369 on the coupon and mailing it to this publication.

No. 6368—Coated Containers

A new bulletin describing how insecticides and other hard-to-handle products which are detrimental to steel containers can be packaged and shipped in standard size steel pails and drums is available without charge. The bulletin has been prepared by Bennett Industries, Inc. According to the company announcement, "Special protective coatings or linings are economically fabricated into the containers as they are manufactured." The statement continues that the company "offers a wide variety of the new lined steel containers called 'Hi-Bake' pails and drums which have phenolic, epon and vinyl resin linings to hold many products that previously caused trouble when shipped in steel." Secure the bulletin by checking No. 6368 on the coupon and mailing it to Croplife.

No. 6367—Movie

A 16 mm. sound and color movie has been produced by the Mackwin Co. to document the company's three years of research on its DDT granular product for controlling the European corn borer. The product is called by the trade name, Mackodee Granules G-20. The movie is available in limited number and reservations for showing dates are now being accepted by the manufacturer. Secure more complete information about the movie by checking No. 6367 on the coupon and dropping it in the mail to Croplife.

No. 6364—Catalog on Process Plants

Design, engineering, construction and initial operation of process industries plants by the Chemical Plants Division of Blaw-Knox Co. are outlined in a new catalog, entitled "Process Plants by Blaw-Knox." Illustrated with photographs of major projects, the brochure is designed to provide information on the diversity and scope of work undertaken and completed in the process industries field.

Subject matter of the 20-page publication covers the following industries: Fertilizers and pesticides; general industrial chemicals; fine chemicals and pharmaceuticals; petroleum and petrochemicals; plant rehabilitation and modernization, and others. Copies of the catalog, Bulletin No. 614, are available upon request. Check No. 6364 on the coupon and a copy will be mailed to you.

No. 6362—Soil Moisture Indicator

The T. W. Prosser Co. is marketing a soil moisture indicator, called by the trade name, Irrrometer. It is designed to automatically evaluate many varying soil and climate factors and register available soil moisture continuously on an easy-to-read gauge. The instrument consists of a hollow porous cup attached to an air-tight, water-filled plastic tube and a vacuum gauge. As the soil moisture is extracted from the porous cup into the soil, causing a suction force (tension) to develop within the Irrrometer which registers on the gauge. After irrigation the same action takes place. Secure complete details by checking No. 6362 on the coupon and mailing it to Croplife.

OVER THE COUNTER

(Continued from page 9)

sales techniques and certain to cause loss of sales. Following are the salesmen who were considered as making the most antagonistic sales approaches:

1. **The door jammer.** He tries to break down sales resistance by overpowering the prospect and cannot understand a simple "No."

2. **The conspirator.** "For you only," insists this salesman as he pulls an item out from under the counter. "My last one, very hard to get," he says, even though the item can be purchased at many other stores.

3. **The name dropper.** This salesman makes numerous mention of prominent people in his sales talk, making a repelling impression on his prospect.

4. **The night owl.** The salesman who asks for only a minute of the prospect's time and hangs around for

hours is the night owl type.

5. **The haughty one.** Self-important to the point of nausea, this "fancy Dan" does the prospect a great favor to wait on him at all and is clearly bored and disinterested.

6. **The upgrader.** No matter what the prospect asks for, the upgrader has a better idea. Invariably, his suggested products always cost more.

7. **The vanishing Americans.** If the buyer is "just looking" the woods are full of Indians; but when he is ready to buy, the tribe vanishes.

8. **The cozy kid.** This salesman insists that "this is just what you need" and is offensive because of his over-familiar approach.

Know the Banker

Know your banker. Let him know your dollar and cents story, urged the farm supply consultant. Let him know just what your business is doing each year. Let your banker know what service is rendered by fertilizer

and other farm chemicals, by modern day feeds, by the newly developed seeds.

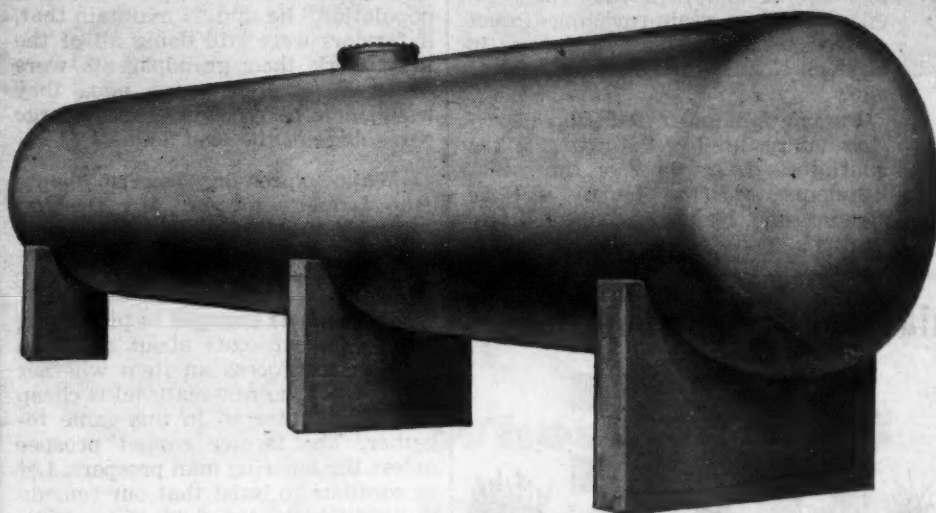
Tell the banker what part the farm supply dealer plays in the agricultural economy of your neighborhood.

One dealer spent a few days in his trade area asking farmers in a frank manner what they thought of his business, what they liked and disliked about it and how to improve his services. Other dealers might use a similar survey, the consultant stated, to find out an amazing number of things which are good about their business and other practices which need improvement.

MOSQUITO CONTROL BUDGET

NEWARK—A budget of \$254,850 for 1956 has been approved for the Essex County (N.J.) Mosquito Extermination Commission. This is about \$12,000 more than was budgeted in 1955.

Welded Aluminum— *best tank* *for liquid nitrogen*



3 sizes of skid tanks for transport. 5 sizes of farm tanks.

Bulk storage in 12,000 and 22,000-gal. capacities.

BUTLER *best source for* *aluminum tanks...all popular sizes!*

Not just any aluminum tanks—they're Butler! Get top quality low-pressure tanks—built and tested by Butler tank specialists—guaranteed by Butler. Each tank is engineered with superior strength in stress areas. And Butler supplies the sizes of low-pressure tanks your business needs. Bulk storage tanks

in 12,000 and 22,000-gal. sizes. Skid tanks for transport in 500, 830, and 1000-gal. sizes. Rugged detachable skids have rubber lined straps to protect metal. Farm storage tanks are available in 100, 270, 500, 830, and 1000-gallon sizes. Mail coupon to Butler now for complete information.



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Better Selling

Richer Sales Fields for Dealers

Retail Dealers Should Promote Complete Crop, Soil Program, New Mexico Association Told

ALBUQUERQUE, N.M. — The feed man's increasing interest in farm chemical business was demonstrated here at the tenth annual meeting of the New Mexico Grain and Feed Dealers Assn. Jan. 15-17. Some 135 members—mostly proprietors of general farm supply stores—and allied trades representatives attended.

Out of eight talks on the program, two dealt specifically with fertilizer topics and two others included the contributions of farm chemicals to good farm programs. The four other talks were devoted to sales, advertising, conservation and New Mexico A&M College work.

Dr. T. C. Longnecker of the privately-financed Texas Research Foundation, Renner, Texas, probably summed up the general feeling of the meeting as follows:

"In your sales program, I would like to suggest—that, instead of being phosphate salesmen or nitrogen salesmen or potash salesmen, you should sell the farmer a complete program. Sell not only the fertilizers themselves but everything that goes with them including proper drainage of the soil, proper insect control, use of good seed—all of the things that give the farmer a satisfactory and profitable yield on his crops."

W. E. Irwin of the fertilizer division, Phillips Chemical Co., Bartlesville, Okla., spoke on "Nitrogen, Its Sources and Uses," but also stressed complete service to the farmer and

the good economic returns resulting from giving the plants what they need.

Both Dr. Longnecker and Mr. Irwin discussed pictures of various types of crops, some showing the symptoms of soil deficiencies and others demonstrating the advantages of nitrogen and other fertilizer elements.

Their advice was backed by Dr. Philip J. Leyendecker, head of the Department of Agricultural Services at State College, N.M. He described some of the 210 test projects now being conducted by the department on all types of land through the co-operation of farmers and fertilizer firms.

Dr. Leyendecker asked the group to take special note of current tests to show the economic value of fertilizing range land. The experiments are being conducted on the ranch of Floyd Lee of San Mateo, long-time president of the New Mexico Wool Growers' Assn.

Another official of New Mexico A&M College, Dallas Rierson, told how New Mexico is winning the war against the khapra beetle. The presence of this grain-ravaging insect was suspected in four warehouses in Eastern New Mexico about 18 months ago.

Fumigation under federal supervision has resulted in the lifting of the quarantine from three of the establishments and the fourth will be cleared soon. He urged continued precautions against the khapra beetle,

and the association went on record in support of his inspection program.

Mr. Rierson, who is director of regulatory services, asked the association to help him in the updating of many of New Mexico's agricultural regulations. Along this same line, Austin Brooks of Clovis, president of the association, urged the membership to continue to exercise care in the labeling and sale of insecticides and other economic poisons.

"We defeated a measure in the last legislature that would have required a doctor's prescription for these poisons," Mr. Brooks said. "Let us deal with these materials in a responsible manner lest some future accident be blamed on our industry."

Dr. Roger B. Corbett, newly-inaugurated president of A&M College, discussed the coming expansion of student enrollment and asked all representatives of the industry to counsel the regents and faculty in the current building program. Jack Copeland of Nara Visa, president of the New Mexico Association of Soil Conservation Districts, also asked the feed and fertilizer industry to co-operate in programs that help the farmer.

The cooperation theme was also voiced by Mr. Brooks. He spoke out strongly against the current outcry about the small percentage of the food dollar going to the American farmer.

"Many individuals will stop at nothing to stir up resentment between the various segments of our population," he said. "I maintain that, if farmers were still doing all of the farm work their grandparents were doing a hundred years ago, they would now be receiving a very large percentage of the food dollar."

While expressing concern about the farmer's income, Mr. Brooks stressed that the work of the supplier, processor and marketer must be compensated, too.

"Those of us engaged in processing realize that it costs about as much per ton to process an item whether the price of the raw material is cheap or high. We are all in this game together. The farmer cannot prosper unless the laboring man prospers. Let us continue to insist that our remedy is definitely in the field of competition. A free economy is our guarantee of reasonable margins and competitive prices."

Mr. Brooks was reelected to another term as president. Clayborne Wayne, who was chairman of the fertilizer section of the program, was reelected vice president. He operates the Farmers Market in Hatch, N.M.

An unscheduled but welcome addition to the program was a snowstorm that covered most of the state. This was the first general moisture since early in December and the largest amount of precipitation for New Mexico since last September.

There was one ominous note in the proceedings, however. Mr. Rierson warned the association that the state may suffer the worst grasshopper infestation in the history of New Mexico this year. Some three million acres of land in the state may be infested by summer. He said that the state now furnishes one third of the cost of spraying against grasshoppers and hoped that citizens would do everything possible to eliminate the pest.

Iowa Insect Outlook

AMES, IOWA—Iowa State College entomologists report the following prospects for insect infestations in the state during 1956: grasshoppers, heavy to very heavy; corn borers, heavy; cutworms, moderate to heavy; rootworms, moderate to heavy; wireworms, moderate, and chinch bugs moderate to heavy.

CROPLIFE, February 6, 1956—2



By RAYMOND ROSSON

County Agent, Washington County, Tenn.

Hey fellows: what direction are you going . . . to the right or to the left? All of us should ask ourselves the same question . . . what direction?

Now-a-days it seems a bit easier to go too far "Haw," but maybe by the same token it is just as easy to go too far "Gee." When U.S. America was a young fellow and when "free thinking" was the order of the day, he was most careful about going haw or too far to the left.

However, he very well knew, he could not continue going gee, or to the right, and if he did, he'd be going around in circles. He learned to turn haw, when it was necessary.

Yes sir: when U.S. America was a young fellow, our fore-farmers got weaned from royalty and turned to loyalty and a lot of free thinking was practiced. Most of the population lived on farms or in very small towns. They had learned to plow straight, build a straight fence, shoot straight, think straight and live straight. Dame Nature was their teacher.

As U.S. America grew older and cities grew larger, it became easier for mass thinking to be practiced. Maybe free thinking has suffered a defeat. 'Tis a good time to be careful about our gees and haws.

No need for strafing or bombing or propaganda for, after all, one of our biggest jobs could be rural-urban relations and remember: rural America has always leaned just a bit geeward.

Clarence Perkins Heads Michigan Insecticide, Fungicide Group

EAST LANSING, MICH. — Clarence Perkins, of McBride, is the new president of the Michigan Insecticide-Fungicide Institute, an organization of those allied in the insecticide-fungicide industry. A potato grower and farm products dealer, Mr. Perkins served last year as vice president.

The outgoing president is Frank Parmalee, of the E-Z Flo Co., Lansing.

Anton Regner, of Dearborn, is the new first vice president, and George Shane, of Watervliet, second vice president. Robert Van Antwerp, of Sparta, is the secretary-treasurer.

The annual Institute's conference, held at Kellogg Center, Michigan State University, featured progress reports about field experience with fungicides, fighting the fire blight, Dutch elm disease and gypsy moth, and other topics. The University's Department of Entomology, Department of Botany and Plant Pathology, and Department of Horticulture joined in sponsoring the educational meeting.

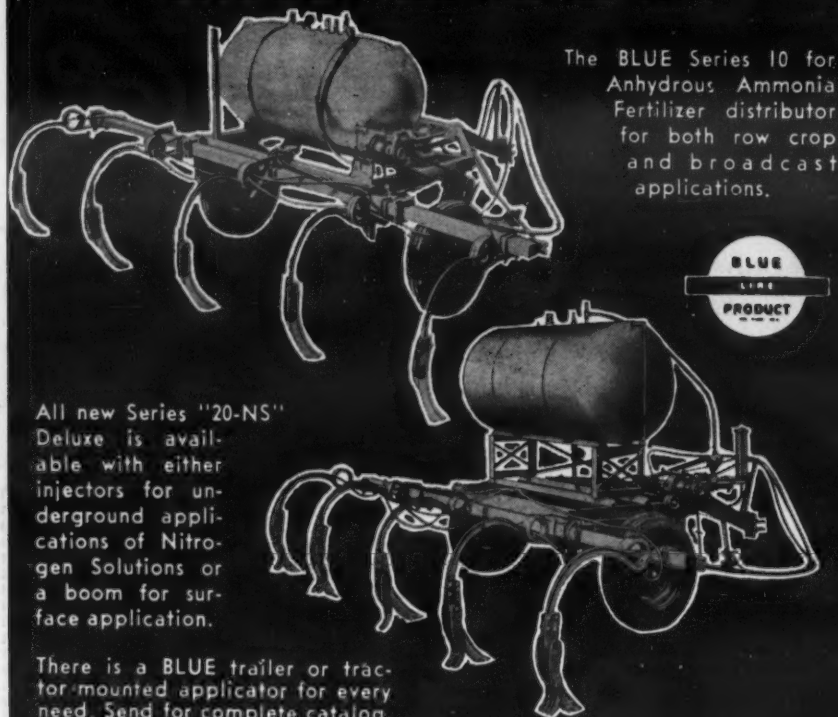
PESTICIDE SCHOOL

CLEMSON, S.C.—The fifth annual South Carolina Pesticide Chemicals School will be held at Clemson College Feb. 28-29.

For Anhydrous Ammonia and Nitrogen Solutions

BLUE

EQUIPMENT Gets Into the Soil!



The BLUE Series 10 for Anhydrous Ammonia Fertilizer distributor for both row crop and broadcast applications.

All new Series "20-NS" Deluxe is available with either injectors for underground applications of Nitrogen Solutions or a boom for surface application.

There is a BLUE trailer or tractor-mounted applicator for every need. Send for complete catalog.

JOHN BLUE CO., INC.

Huntsville, Alabama, Dependable Farm Equipment Since 1886

ADVISORY GROUP

(Continued from page 1)

ended fundamental studies on soils water for solution of many critical problems in agriculture, and particularly that basic investigations of soil-water-plant relationships should be expanded. Among the research needs considered most urgent by the committee are:

Fertilizer Improvement: Improve methods for fertilizer quality control. Procedures to secure more uniform standard fertilizer quality controls throughout the country should be developed by the federal government, the committee included. Study liquid mixed fertilizer formulations to determine that materials are compatible, ways of incorporating minor elements, prevention of potash salting, and economic methods for using wet-process phosphoric acid in liquid mixed fertilizers.

Soil and Water Management Research—Irrigated and Dryland Regions: Expand research on moisture conservation and erosion control in arid areas, including development of tillage implements and practices for wind-erosion control. Expand research on irrigation methods for the more than 26 million acres of cultivated cropland, pastures, and mountain meadows under irrigation in the western United States.

Other Soil and Water Management Research: Expand studies of ways of conserving all supplies of irrigation water available throughout the nation. Expand research on the use of nitrogen fertilizers in relation to the need for legumes and grasses in crop rotations to protect against erosion and soil deterioration.

Basic Soil-Plant Relationships: Initiate research on the fundamental effects of soil structure that affect production of crops. Both the natural structure developed by soil-forming processes and the modified structure induced by cultivation and management practices are of importance in soil productivity. Initiate a comprehensive laboratory study under controlled conditions of the complex interrelation of factors which influences the movement of water into and through soils.

The Soils, Water and Fertilizer Research Advisory Committee, established under the Research and Marketing Act of 1946, will submit its final recommendations on proposals discussed at this year's meeting to the U.S. Department of Agriculture during the next few weeks.

Members present at the meeting were James J. Wallace, farm manager, Iowa State College Agricultural Foundation, Ames, Iowa, committee chairman; Wayne M. Akin, Western Farm Management Co., Phoenix, Ariz.; Everett M. Barr, Liberty, Neb.; Russell Coleman, executive vice president, National Plant Food Institute, Washington, D.C.; W. Lewis David, Corsicana, Texas; E. M. Meyer, Weymouth, Mass.; Clair P. Jess, Jr., Columbia, S.C.; Lester F. Helix, Ore.; Dr. D. F. Peterson, head, Department of Civil Engineering, Colorado Agricultural and Mechanical College, Fort Collins, Colo., and Dr. N. J. Volk, associate director, Agricultural Experiment Station, Lafayette, Ind. Dr. C. P. Jones of the USDA Agricultural Research Service is executive secretary of the committee.

Florida Consumption

MALAHASSEE, FLA.—Fertilizer consumption in Florida during December totaled 176,823 tons, according to the state Department of Agriculture. This included 125,105 tons of goods and 51,718 tons of ma-

New Construction In Next Two Years Set at \$1.6 Billion

WASHINGTON—An estimated \$1.6 billion will be spent on new chemical construction through 1956 and 1957, according to a survey made public here Jan. 30 by Gen. J. E. Hull, U.S.A., Ret., president, Manufacturing Chemists' Assn. The MCA survey also disclosed that privately financed chemical construction projects completed during 1955 totaled \$772 million.

The survey covered 599 projects, 269 of which were completed during 1955. The additional 246 projects now under construction will cost an estimated \$1.1 billion. The survey also reported 84 projects definitely committed which will cost an estimated \$507 million.

The total of projects completed in 1955, plus those under construction or

definitely planned for completion within the next two years, reaches \$2.3 billion.

Consolidation of completed, under construction or planned figures shows that in 1955 the industry made its heaviest investment, \$633 million, in heavy and fine organic chemicals. The second largest investment, \$481 million was in the field of inorganic chemicals. The third largest, \$433 million, was for fertilizer chemicals.

Not included in the MCA survey is a reported \$3.3 billion of government-financed chemical construction under way or completed in the calendar year 1955, most of it under contract with chemical companies. This construction includes seven expansions and two new chemical plants for the Atomic Energy Commission as well as various other government chemical installations.

The MCA survey reported chemical construction projects in 43 of the 48 states. All geographical areas

are represented with the South and Southwest, Far West and Middle West showing the greatest expansion.

On an individual state basis, Texas, currently the third ranking chemical producing state, led the way in new chemical construction with 66 projects costing an estimated \$414.8 million completed, under way or definitely scheduled. California was second with 49 projects valued at an estimated \$185.8 million. Ohio, with 38 construction projects amounting to \$152.6 million, was third.

Proceedings Available

NEW BRUNSWICK, N.J.—Copies of the proceedings of the tenth annual Northeastern Weed Control Conference, held in New York Jan. 6, can be obtained from R. J. Aldrich, conference secretary, Farm Crops Department, Rutgers University, New Brunswick, N.J. The proceedings, which contain 57 papers, are \$3 a copy.

YOU Increase PROFITS

When You Sell
Lion Nitrogen Fertilizers
Because The LION Brand Is Pre-Sold

HERE'S THE LION LINE-UP OF QUALITY NITROGEN FERTILIZER MATERIALS

Lion Anhydrous Ammonia—82.2% nitrogen. Quality guaranteed.

Lion Aqua Ammonia—Ammonia content about 30%—other grades to suit your requirements.

Lion Ammonium Nitrate Fertilizer—Improved spherical pellets. Guaranteed 33.5% nitrogen.

Lion Nitrogen Fertilizer Solutions—Various types to suit your particular manufacturing needs.

Lion Sulphate of Ammonia—White, uniform, free flowing crystals. Guaranteed 21% nitrogen.

Retailers who market Lion nitrogen fertilizers are enjoying sales increases and expanding profits, because the Lion brand is being continuously *pre-sold* to farmers—and retailers reap the benefits.

Throughout the year, Lion advertising appears in leading state farm publications, and in Farm & Ranch-Southern Agriculturist, Prairie Farmer, Progressive Farmer, and Wallaces' Farmer & Iowa Homestead. These advertisements tell farmers—again and again—the facts about plant foods: that the farmer who uses the proper kinds and amounts of commercial fertilizers will increase his yields and his profits. This advertising sells fertilizers, for Lion and for you!

Lion's two giant chemical plants have the capacity to assure you a steady supply of the most popular and economical types of nitrogen fertilizers. In fact, Lion is the world's largest manufacturer of prilled ammonium nitrate, and one of the industry's leaders in producing other nitrogen fertilizer materials.

It's easy to sell nitrogen fertilizers with the Lion emblem on the bag, or Lion's anhydrous ammonia. And easier selling adds up to *more profits for you.*

DISTRICT SALES OFFICES: NATIONAL BANK OF COMMERCE BUILDING, New Orleans, La. • SHEPHERD BUILDING, Montgomery, Ala.

LION OIL

A DIVISION OF MONSANTO
CHEMICAL COMPANY



LION

COMPANY

EL DORADO, ARKANSAS

Judge Dismisses Suit Against Olin Mathieson "With Prejudice"

LITTLE ROCK—A \$280,000 damage suit filed against Olin Mathieson Chemical Corp. by the Arkansas Plant Food Co. of North Little Rock has been dismissed by Federal Judge Harry J. Lemley, of the U.S. District Court here. Dismissal was noted on the court docket "with prejudice," which precludes a re-filing of the charges.

The plaintiff last April charged Olin Mathieson with forcing the North Little Rock firm to pay higher prices for superphosphate than those paid by other customers, in violation of the Robinson-Patman Act.

In an effort to support that allegation, counsel for Arkansas Plant Food conducted an extensive examination of Olin Mathieson's files. Following this, counsel for the plaintiff admitted in open court that his client did not have a case against Olin Mathieson. Accordingly, the judge entered his order dismissing the action.

Commenting on the dismissal, Sam L. Nevins, Olin Mathieson vice president said, "I am gratified at the court's action in dismissing this complaint which vindicates Olin Mathieson and its management of the charges made."



Bruce Campbell

Grand River Chemical Appoints Two New Sales Representatives

TULSA—The appointment of Bruce Campbell and Norman Messick to the sales staff of the Grand River Chemical Division of Deere & Co. has just been announced.

Mr. Campbell will be sales representative for the company in Nebraska and Kansas. He was a 1950



Norman Messick

graduate from the University of Nebraska and is well acquainted with agriculture in the area. He has served as a veterans' agricultural inspector, farmer, and in the Soil Conservation Service. Mr. Campbell will reside in Lincoln, Neb.

Mr. Messick assumes the position of sales representative in New Mexico, Western Texas and Eastern Arizona. He is a 1951 graduate from New Mexico A&M and served as an officer in the U.S. Air Force. Later he assumed the position of fertilizer and feed inspector for the New Mexico State Dept. of Agriculture. In his new position, Mr. Messick will reside in Las Cruces, N.M.

Both men will engage in the sale of the company's urea nitrogen fertilizer, Vitrea, and anhydrous ammonia.

MITE STUDY

FORT COLLINS, COLO.—Tyler A. Wooley, associate professor of zoology at Colorado A&M College, has received a \$2,500 National Science Foundation grant for a two-year study of Colorado soil mites.

Diseases Take 11.5% Toll From 1955 Cotton Yields

MEMPHIS — Diseases cut cotton yields an estimated 11.5% last year compared to 14.6% in 1954, according to the Cotton Disease Council.

Seedling diseases, which cut production an estimated 363,500 bales caused a greater loss than any other disease—even though the loss was down almost 100,000 bales from 1954.

Boil rot losses were up sharply from 114,400 bales in 1954 to 222,100 bales in 1955, mainly because of unfavorable weather during the harvesting season in many parts of the Belt.

Loss estimates for other major diseases in 1955: bacterial blight, 222,600; verticillium wilt, 189,200; fusarium wilt, 173,900; root knot (nematodes), 164,800; root rot, 164,200; anthracnose, 89,800; ascochyta blight, 12,250 bales.

Annual loss estimates are prepared by a special committee of the Disease Council, on the basis of reports submitted by 50 cooperators located in all major producing areas of the Belt. P. J. Leyendecker of New Mexico A&M College, is committee chairman.

Progress Made in Control of Blister Rust Disease

WASHINGTON—The blister rust disease which attacks white pine (5-needled pines) has been checked on 17 million acres of the 23.3 million acres needing control, the U.S. Department of Agriculture announced Feb. 1.

Reports from field offices of the Forest Service which heads up the control work show that 1.4 million acres received treatment during 1955 and 12.8 million wild currant and gooseberry bushes of the ribes family were destroyed. These plants are the intermediary hosts, transmitting the disease from one white pine to another. State and local agencies contributed \$712,000 to the 1955 control program, an increase of \$62,000 over 1954 contributions.

To look at the job ahead and make plans for future control measures, representatives from Forest Service regions carrying on this work will meet in Washington, Feb. 6-10.

Arthur K. Doig Joins Michigan Chemical

ST. LOUIS, MICH. — Michigan Chemical Corp. has announced the appointment of Arthur K. Doig to its organic research staff at Saint Louis, Mich.

Mr. Doig received his B.S. in 1949 from St. Lawrence University, Canton, N.Y. After working in the chemical industry and serving in the armed forces in India, he returned to St. Lawrence University for his M.A. in 1949. He was associated with Shulton, Inc., for the past six years carrying on organic synthesis research.

HORSE NETTLE ERADICATED

STILLWATER, OKLA. — Horse nettle has been successfully eradicated in Oklahoma A&M College tests by three annual treatments with amine 2,4-D, applied at the rate of one pound per acre when the plants were in the full bloom stage. The tests were made in permanent pasture where the weeds were in competition with grass. Eradication is expected to be somewhat more difficult in cultivated fields, according to the college.

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ARMOUR FERTILIZER WORKS



WORLD REPORT

By **GEORGE E. SWARBRECK**
Croplife Canadian and Overseas Editor

Quebec Financing

Financing arrangements for the \$8 million ammonia plant of Quebec Ammonia Co. are almost complete. The company recently made a long term sales contract with Du Pont of Canada to supply that company's ammonia requirements, with several other users likely takers. (Croplife, Jan. 23, page 7.)

Serial bonds to the value of \$2,500,000 are to be sold privately; \$2,900,000 in debentures, \$850,000 preferred stock and 500,000 common shares.

About 30% of the common stock is reported to be going to the underwriters of the bonds and debentures and 40% to Robert Campbell, Vancouver, president of Quebec Ammonia and leading spirit in several other ventures in the chemical field.

A reservation of 30% is being made for customers. The new plant is being built at Ardenne, Que.

Aircraft Use

A rough assessment shows that today there are about 11,000 aircraft in use for agricultural purposes throughout the world. Their work includes fertilizer top-dressing, crop spraying with insecticides and herbicides, forest dusting and anti-locust campaigns. In New Zealand 250 planes are employed and it is in that country that considerable progress has been made in the work of aerial application.

Until now it has been a question of improvisation. Light private aircraft and even small bombers have been adapted for agricultural purposes with varying degrees of success. From time to time new machines have come along; such as the Canadian-built de Havilland Beaver, capable of carrying greater loads than the improvised aircraft, but not sufficiently economic in operation, or suitable in design to be truly agricultural aircraft.

Top-dressing with fertilizer brings considerable problems, as the pioneers discovered. Superphosphate, for instance, if allowed to become moist, causes corrosion. This extends to the light alloy stressed skin coverings of wings and fuselage.

The corrosion can eat through riveted joints, rivets and flying control wires, corroding rudder and taileron movements, making the machine tail-heavy and dangerous to fly.

Corrosion may penetrate the cockpit and affect the instruments. There's an ever greater danger—in most adapted aircraft the pilot sits between the engine and the fertilizer hopper; in the event of a crash—and there have been some, for this is a risky flying—he has been the ham of the sandwich.

Two British Designs

Because of the need to meet these problems, the British set to work to design aircraft specifically for agricultural work. Just completed are the Percival P9, a high wing monoplane, and the Auster Agricola, a low wing monoplane.

Their flying trials, now in progress, mark the climax of a race which began two years ago when the New Zealand government appealed to U.K. aircraft makers to produce specialized machines for aerial top-dressing program.

The P9, British authorities state, has a 270 h.p. Lycoming engine, and

a gross weight of 3,675 lb., giving a fertilizer load of 1,550 lb. The fuselage design enables the tail plane and rudder assembly attached to the thin after end of the fuselage to be carried high, well above the slipstream of the fertilizer. Even so, to prevent any possible corrosion, the fuselage is covered in easily repairable fabric which is treated with anti-corrosion dope. The pilot sits well above the hopper, with a view ahead and all around.

The Auster Agricola has a 240 h.p. engine, and a loading of 1,680 lb. fertilizer. Corrosion is guarded

against by special plastic dopes and paints on the fabric-covered fuselage and wings. Control cables, outside the fuselage for ease of inspection, are nylon covered. The pilot sits above and behind the engine and fertilizer hopper, with the cockpit sealed from drifting fertilizer.

The price, in Britain, will be about \$15,400 for each machine.

Wild Oats

Wild oats infestation presents a problem of major proportions for Canadian farmers. Control chemically is impossible at the present time.

But Dr. L. H. J. Shebeski, head of the plant science department at the University of Manitoba, holds out a glimmer of hope. Chemical control may be possible in a few years, he revealed to the annual meeting of the Saskatchewan branch of the Canadian Seed Growers' Assn. at a recent meeting.

Dr. Shebeski outlined experiments at the university that have

eliminated wild oats in test plots without harming wheat, barley and flax. The experiments were with chemicals incorporated in the soil which on contact killed the germinability of the wild oat seed.

The tests were carried out on well-worked summerfallow. So further tests had to be carried out to find out how the chemicals would perform under farm conditions.

Wild oats have been described as Canada's No. 1 menace, and infestation costs the farmers thousands of dollars a year.

Fertilizer for Korea

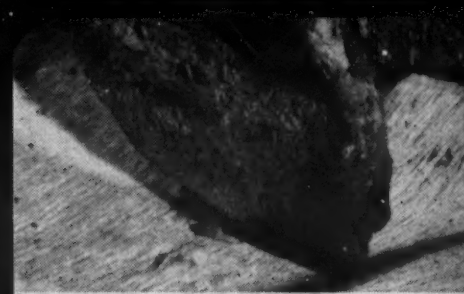
The International Cooperation Administration has announced a series of awards for the supply of fertilizers to Korea, the cost coming out of U.S. aid funds. Involved are urea, ammonium sulfate and ammonium nitrate. Supplies will come from Italy, Japan, Canada, West Germany and the U.S.



CORN PLANTER ATTACHMENT—Liquid fertilizer streams from modified corn planter shoe beneath corn as it is planted. Clod shield protects the tube feeding liquid. (Shoe is above ground for demonstration purposes.)



CULTIVATOR ATTACHMENT—With a rig like this, it's easy for a farmer to fertilize as he cultivates. Use of complete liquid fertilizer eliminates need for carrying heavy bags.



CLOSE-UP—The special attachment at bottom of shoe on corn planter delivers fertilizer into soil; permits application of liquid simultaneously with planting.

New applicator equipment means longer selling season for liquid fertilizer formulators

New applying equipment is doing much to level out historic spring-fall peaks in fertilizer application. Ease of liquid application encourages fertilizing almost any month of the year. Pictured above are two examples of equipment progress: (1) A new modification to permit application at time corn is planted, and (2) A cultivator attachment which permits side dressing of crops with liquid fertilizer.

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FARM BILL

(Continued from page 1)

the Cuban market presents a grave difficulty at the State Department, and the seemingly simple testing ground for this commodity as a two-price system guinea pig is doomed to oblivion, at least at this time.

Up to this time the soil bank proposal is in the background of the committee considerations. The committee last week spent hours discussing proposal by Sen. Edward Thye (R., Minn.) under which there would be a guaranteed scale of supports for producers of basic commodities. A large producer would obtain a lower level of price support than would a smaller farmer.

The present state of affairs within the Senate Agriculture Committee can only be mildly described as fluid.

Top Republicans on the committee now admit that the committee will approve a return of rigid high price supports for the basic commodities

at 90% of parity. It is inferred that the recent grave error within the staff of USDA where the secretary was caught in a mistake of a subordinate in approving a magazine article highly critical of the farmer may have persuaded some Republican members of the committee to desert the flexible price support provisions of the party.

It is now seen that a restoration of the rigid supports will be voted by the committee on a 9-6 or an 8-7 basis depending on the position of three Democratic senators. The Republican defections are now seen as those of Sen. Young and Sen. Karl Mundt (R., S.D.). This defection indicates an approval of another year at least of rigid high price supports for basic commodities at 90% of parity.

That such a Senate bill can get floor approval is a moot question with

the leaning to the opinion that the Senate will approve on the floor by a thin margin.

It is seen here that the President will certainly veto any return of rigid high price supports. At the same time it is conceded that it is administratively impossible to handle quality level supports for the fungible commodities such as the grains. Differential supports may work effectively for cotton but trade sources insist that they will not and cannot work for wheat.

For the fertilizer and pesticide industry this uncertainty creates many doubts over the crop outlook.

First, the delay on legislation will delay cooperation among farmers who might through cash payment incentive be encouraged to join in taking land out of production over and above acreage allotments for the basic crops.

Next, a quality differential in price support activities, except for cotton, would leave the plant food and protective chemical industries in an ob-

scure position. Legislation of this kind would provoke great animosity between areas. Who, for example, would be qualified to define a desirable quality of wheat—let's say on protein basis alone?

The Pacific Northwest immediately could protest that its market for white wheat had previously been destroyed by the government loan program differentials. The soft red wheats—so frequently described as quality wheat producers—could with assurance say that their wheat represented less of a burden on government surplus than that of any other variety.

Unhappily the congressional discussions are salted heavily with political overtones. The bare economics of the situation—that which discloses clearly that intelligent use of plant food and pesticidal chemicals can reduce the cost per unit of production on less land—and with less overhead—are not an active ingredient of the committee.

As things stood here late last week it hardly seemed possible that a Senate bill would emerge from committee before the middle of this week.

Missouri Report Indicates Many Grasshoppers in 1956

COLUMBIA, MO. — Grasshopper chinch bugs and possibly armyworms are likely to be abundant in Missouri during the 1956 growing season, according to a pre-season report just issued by Stirling Kyd and George W. Thomas, extension and survey entomologists, respectively.

A relatively heavy carryover of grasshoppers was noted at the beginning of winter, but weather conditions during the spring and summer will largely govern the amount of damage these pests will do during 1956, the entomologist said. "If it is another dry year, we can expect trouble; if the spring is wet and cold and if there is adequate rainfall throughout the summer, damage could be light," it was pointed out.

The report indicated that although there is a carryover in nearly every county that could cause trouble under conditions ideal for hopper development, those counties in the western half of the state will probably be the most heavily infested.

Materials recommended for grasshopper control included dieldrin, aldrin, heptachlor, toxaphene and chlordane, according to the report.

Chinch bugs, the entomologists report, could also cause trouble in 1956. As in the case of grasshoppers, however, whether or not this trouble materializes will depend upon spring weather.

Last year, an unusually large number of bugs overwintered, but spring weather greatly reduced the population and there was no extensive damage over the state, although spraying was necessary in some areas.

"This winter, we again have heavy over-wintering population in some areas," the report pointed out. "The northwestern counties and the southeast delta area are most heavily infested, but there are enough in many counties that moderate to severe damage could show up in certain localities."

The situation concerning the European corn borer is described as being "very spotted." Although counties in several areas are numerous, there is no consistent, heavy increase throughout the major corn-producing areas of the state. Farmers are advised to watch each field individually, since small areas should be regarded as different situations in the abundance of this corn pest.

As to armyworms, the entomologists reminded that these insects come from eggs laid by moths that migrate into the state early in the spring, which makes it impossible to calculate the extent of infestation.

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Stauffer Chemical Earnings Show 33% Gain in 1955

NEW YORK—Preliminary unaudited earnings of \$12,305,000, or \$4.04 per share for 1955 have been announced by Hans Stauffer, president, Stauffer Chemical Co. This represents an increase of 33% over 1954 earnings of \$9,210,000, or \$3.02 per share.

Sales for 1955 were reported at \$45,490,000, up 24% from 1954 sales of \$36,616,000. These figures include earnings and sales of Consolidated Chemical Industries which was merged with Stauffer in November last year.

STAUFFER-MEYER

(Continued from page 1)

located on the New York and San Francisco Stock Exchanges. The Meyer firm has district offices in Los Angeles, Portland, Seattle, Spokane, Salt Lake City, Denver, Phoenix and Fresno, in addition to its headquarters in San Francisco, where it was founded 105 years ago.

One of the important recent developments in Stauffer operations was the addition of a new unit at its Fernon plant to produce pelletized plant foods.

Another recent addition is the new plant of Western Phosphates, Inc. at Garfield, Utah. Here the Stauffer Co. shares an interest with American Smelting and Refining Co. and Kennecott Copper Co.

For these and other Stauffer plants, the Meyer firm has acted as sales representatives in the West and Midwest. The new agreement announced in New York extends and formalizes this relationship.

GRACE

(Continued from page 1)

Memphis, and Grace Chemical Research and Development Co., New York.

In 1952 chemicals amounted to only 2% of the company's business, Mr. Rupley said. Anticipated cash flow this year will be 45 to 50% from chemicals, with continuation of the company's emphasis on chemical development.

Mr. Rupley estimated chemical sales last year at \$145 million, an increase of about 11% over 1954. He indicated that full production at the Memphis chemical plant will reflect in considerably higher sales in 1956.

Grace's liaison with German and other European firms should speed the firm's growth in chemicals, Mr. Rupley said. He noted that two or three important processes used by the Memphis chemical plant are European. In partnership with the Hoechst chemical firm of Germany, Grace is building a DDT and a polyethylene plant in Brazil and sponsoring research on urea crystallization. Mr. Rupley said Grace is concentrating about \$7 million a year on research.

GRAIN SANITATION WINNER

ST. PAUL—The Wang Happy Farmers 4-H club of Renville County will receive a \$100 award as Minnesota winner in the 4-H grain sanitation program for 1955. The clean grain program is sponsored by the University of Minnesota Agricultural Extension Service and the agricultural department of F. H. Peavey & Co. Peavey is providing the awards. Objective of the program is to make needed improvements in grain storage and handling, including rodent, bird and insect control.

NORTHERN CHEMICAL

(Continued from page 1)

Girdler engineers. Ground was broken on the 160 acre site in November, 1954. The site adjoins the Bangor and Aroostook Railroad.

Mr. Totman reported that the 7,500 KW power plant was scheduled to be completed late in January, and the new sulphuric acid unit was to come on stream soon after.

The nitric acid and nitrogen fertilizer solutions units are scheduled for completion about March 1, with the anhydrous ammonia line coming into production during June, 1956.

A fleet of 45 tank cars painted in red, white and blue will service industrial and agricultural customers.

Associated with Northern Chemical is the Summers Fertilizer Co., which has, at its nine manufacturing plants, captive requirements for a substantial percentage of Northern

Chemical's nitrogen production, Mr. Totman said. Upon completion this spring, the new plant will be the only nitrogen producing point in the Northeast area.

Mr. Totman said that Northern Chemical will be the first company in North America to produce anhydrous ammonia exclusively from Bunker "C" oil under the Texaco Oil-Hydrocarbon Research Process.

SOIL GROUP ELECTS

AIKEN, S.C.—Louis E. Hendrick of Pickens is new president of the South Carolina Association of Soil Conservation District Supervisors. The association also elected Newman Buck of Mount Pleasant and Clifford Smith of Kinards, vice presidents; E. C. Turner of Clemson, secretary; Leroy B. King of Moncks Corner, treasurer; and H. W. Perrow of Cameron, J. Ryan Jeter of Santuck, and Dr. L. W. Temple of Lake View, executive committeemen.

Soil Conditioner Advertising by Firm Misleading, Jury Rules

HASTINGS, MINN. — A Dakota County district court jury here has handed down a verdict in a case involving sale of soil conditioner.

Northern Field Seed Co., Winona, Minn., brought the action against Henry Bartel, Hastings, a farmer, to collect \$2,730 the firm claimed was due for 49 tons of soil conditioner.

The jury awarded the firm \$1,350, ruling that the company had made fraudulent claims for the product in its advertising. Testimony brought out that some of the advertising claimed that the product had a 2-8-4 analysis.

In reducing the claim sought by the company, the jury ruled that the company misrepresented the product in its advertising by claiming that it had fertilizer properties. The conditioner is mixed by the Winona firm.

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Write for complete specifications and samples; our technicians are available to help with your processing operations.

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Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Midwestern states.

Family Farm "Way of Life" Seen from Different Angles

Much has been said lately in these columns and elsewhere about the industrialization of agriculture which is obviously taking place in this country.

To those who have thoughtfully observed this development it marks the certain decline, though not necessarily the total disappearance, of the so-called small family farm. It would seem that, as industrialization proceeds, farming must become less and less of a way of life, and thus less of an emotional and ideological factor in the political and social economy of the nation. Time Magazine recently made this discovery concerning the position of agriculture:

"The small farmer," it said, "is dying out; the big farmer, with enough rolling, clanking machines to equip a tank platoon, has taken over his land, and farms it more efficiently. Like U.S. business men, the nation's farmers have turned to automation."

Advertising Age comments: "Industrialized farming has continued to mean fewer farms, and fewer people depending on farming for a living. But it has also bred a strain of farmer who is a prosperous, informed and shrewd entrepreneur, working with costly equipment to exact the maximum return from his substantial investment in carefully managed livestock and land."

Newsweek Magazine says: "The decline in farm prices has accelerated the mechanization of American agriculture. Only the more efficient producers can survive. The man who doesn't farm enough land to justify the new scientific methods of farming—or who doesn't have the capital for the necessary equipment—must sell out. The result: American farms are getting bigger and bigger, while more and more farmers are leaving the land."

From Farm Management Magazine: "Mechanization, good management practices, use of fertilizers and chemicals have all aided the genuine, full-time, efficient farmer in boosting production, improving quality standards, and making farming an exacting business proposition. The progress made by the upper strata of farmers is fully as outstanding as that of those in industry."

From Fortune Magazine: "Over-all statistics vastly understate the actual growth in the efficiency and prosperity of U.S. agriculture because they include millions of so-called farms and farmers that are really not part of U.S. commercial agriculture at all. The efficient farms, by contrast, are becoming truly industrial organizations."

Business Week Magazine: "The real economic problem has always been the small, inefficient farmer—the man who has too little land to yield a good living, no matter how high prices might be. The real answer for him has always been a job in town. It's the answer to the 'farm problem,' too, because it leaves production for the market in the hands of his more efficient neighbors."

A century ago about 14 out of every 20 people in the U.S. were employed in agriculture, leaving only 6 out of 20 to carry on all the manufacturing, transportation and service trades of the nation. But today conditions are reversed, with about 17 out of 20 employed in non-farm occupations and only 3 in 20 employed in farming.

Secretary of Agriculture Benson disputes the conclusion that the small farmer is disappearing from the American scene. He says fewer farmers have left their acres in the last three years than in the previous three years, and that any attempt to show, as Edward R. Murrow seems to have

done in his recent television run-down on the farm problem, "that the small farmer is dying is a perversion of the truth."

In the background of this dispute is the ideological assumption that the small family farm ought not to be allowed to disappear or diminish in number, and that at all costs it should be preserved. The halls of Congress will resound in the days immediately ahead, as they have echoed in the recent past, with the credo that the family farm as a way of life cannot, without hazard to the American economy and the nation's security, be spared. In tenor, though not in significance, the argument will be that of the day when the automobile was pushing the maker of the horse collar and the livery stable to the wall—or rather, into the motor industry.

The great political shibboleth of the day is that parity income, by legislative and administrative action, must be assured to the small farmer. This tenet, of course, implies that he is essential to the national welfare and economy. No contradictory platform would be politically tenable; nor is there likely to be any public espousal of a cause, political or otherwise, dedicated to putting the family farmer away with the horse collar. Dedicated public spirits all take the opposite tack. They proceed, without questioning the premise that family farming is indispensable, to the advocacy of measures that will perpetuate family farming by making it profitable. Addressing itself to this mode of thinking and approach, the Farmers Union Grain Terminal Assn. is offering to Congress the fruit of a survey conducted in five midwestern states "to determine how the typical family-operated farms have fared during the five years from 1950 through 1954."

"These findings," says GTA, "primarily throw light on the trends in gross income, costs and net returns of the grain, livestock and dairy farmers of the Dakotas, Montana, Minnesota and Wisconsin; and why, in the face of unprecedented national prosperity, we are witnessing the most rapid annual decline in farm population and in the number of family-operated farms."

"Congress must act quickly," concludes GTA, "or we shall see a further substantial decline in the number of farm families and a further rise in large-scale farming. We believe this would not be in the best national interest."

"Surely," argues GTA, "it is in the public interest to protect family commercial farming. Any farm program must stop making big operators bigger and hurting family farms. Price and income aids must go to the family farms with strict limits on federal funds paid to operators above a predetermined level."

The GTA survey is reported in a printed booklet of nearly 250 pages. It states the official association view that support prices must be set high enough to raise family farming to a profitable level. The farm problem, states M. W. Thatcher, general manager of GTA, results from lowered price supports and a persistent advance in costs of farm production. "The persistent advance in farm costs," he says, "is due to the ever-expanding power of business, manufacturing, finance, transportation and labor over the prices of farm products, aided by state and federal legislation as well as by their own powerful organizations. There is no foreseeable hope whatever that this trend will be reversed. Every official forecast is for further increases in the price farmers must pay for non-farm goods and services."

Industrialization of agriculture clearly is excluded from this concept of the farm problem, as it seems to be also from the thinking in Washington. But are not Mr. Thatcher and Mr. Benson, as champions of farming as a way of life, whistling against a wind?



Croplife



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG

Editor

DONALD NETH

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Associated Publications—THE NORTHWESTERN MILLER, THE AMERICAN BAKER, FEEDSTUFFS, MILLING PRODUCTION.

MEETING MEMOS

Feb. 6-8—Agronomy Section, Association of Southern Agricultural Workers, Atlanta (Ga.), Biltmore Hotel; W. E. Colwell, North Carolina State College, Secretary.

Feb. 6-8—Cotton State Branch, Entomological Society of America, Biltmore Hotel, Atlanta, Ga.; W. G. Eden, Alabama Polytechnic Institute, Auburn, Ala., secretary-treasurer.

Feb. 7-8—Central Plant Protection Board, Allerton Hotel, Chicago, Ill.

Feb. 7-9—National Garden Supply Trade Show, Kingsbridge Armory, New York City.

Feb. 9-10—Annual Wyoming Weed and Pest Control Conference, Riverton, Wyo.

Feb. 13—Arkansas Anhydrous Ammonia Dealers Assn., Lafayette Hotel, Little Rock; G. E. Davis, Lepanto, Ark., secretary-treasurer.

Feb. 14-16—Agricultural Chemicals Conference, Lubbock, Texas.

Feb. 15-16—Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater, Okla.

Feb. 15-17—California Weed Control

Conference, Sacramento and Davis, Cal.; Oliver A. Leonard, Botany Dept., University of California, Davis, Cal., secretary.

Feb. 15-17—Western Weed Control Conference, Sacramento and Davis, Cal.; W. C. Robacker, U.S. Department of Agriculture, Nevada Agricultural Experiment Station, Reno, Nev., secretary-treasurer.

Feb. 16-17—Middle West Soil Improvement Committee's annual joint meeting of the fertilizer industry and Universities; Edgewater Beach Hotel, Chicago.

Feb. 18-20—Third Annual Pacific Northwest Agricultural Chemical Industry Conference, Imperial and Benson Hotels, Portland, Ore.

Feb. 20-21—Southwestern Branch, Entomological Society of America, Hotel Texas, Fort Worth, Texas.

Feb. 22-24—Fifth Annual Ohio-Indiana Agricultural Aviation Conference, Ohio Union, Ohio State University, Columbus.

Feb. 22-24—Alabama Pest Control Conference; Alabama Polytechnic Institute, Auburn, Ala.

Feb. 22-24—Midwestern Chapter, National Shade Tree Conference; LaSalle Hotel, Chicago; Noel B. Wysong, Cook County Forest Preserve, River Forest, Ill., secretary.

Feb. 28-29—Fifth Annual Pesticide Chemicals School, Clemson House, Clemson, S.C., Dr. J. H. Cochran, Dept. of Entomology and Zoology, Clemson College, Clemson, S.C.

March 6-7—Fifth Annual Western Cotton Production Conference, Fresno Hacienda, Fresno, Cal.

March 14-18—National Agricultural Chemicals Assn., Spring Meeting; Hollywood Beach Hotel, Hollywood, Fla.; Lea S. Hiltner, NAO executive secretary, 1145 19th St. N.W., Washington 6, D.C.

March 28-30—North Central States Branch, Entomological Society of America, Purdue University Memorial Union, Lafayette, Ind.

April 10-12—Council for Agricultural and Chemurgic Research, 21st Annual Conference; Congress Hotel, Chicago; Sec., John W. Ticknor, Council for Agricultural and Chemurgic Research, 350 Fifth Ave., New York 1, N.Y.

April 16-17—Fourth Annual California Fertilizer Conference, Citrus Experiment Station, University of California, Riverside. Sidney H. Bierly, secretary, 457 Huntington Drive, San Marino 9, Cal.

May 16-18—Synthetic Organic Chemical Manufacturers Assn., Annual Outing, Skytop, Pa.

May 20-22—42nd Mid-year Meeting, Chemical Specialties Manufacturers Assn., Drake Hotel, Chicago; H. W. Hamilton, secretary, 50 E. 41st St., New York 17.

June 10-13—National Plant Food Institute, Annual Convention, the Greenbrier, White Sulphur Springs, W. Va.

June 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

July 12—South Carolina Fertilizer Meeting, Tour of Edisto Experiment Station, Blackville, S.C.

July 19-20—Southwestern Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

July 25-27—Northwest Association of Horticulturists, Entomologists and Plant Pathologists Conference, Northwest Washington Experiment Station, Mount Vernon, Wash.

Aug. 17-25—Tenth International Congress of Entomology, McGill University and University of Montreal, Montreal, Canada, J. A. Downes, Science Service Bldg., Carling Ave., Ottawa, Ontario, Canada, Congress Secretary.

Nov. 19-20—Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., Secretary.

North Carolina Shipments

RALEIGH, N.C.—Fertilizer shipments in North Carolina totaled 225,182 tons in the last half of 1955, compared with 264,475 tons in a corresponding period in 1954, according to the State Department of Agriculture. December shipments were 53,152 tons, compared with 64,846 tons in December, 1954.

RETURNS TO MISSOURI

COLUMBIA, MO.—Dr. Arnold W. Klemme has been named assistant director of the Missouri Agricultural Experiment Station. Dr. Klemme is a former county agent and soils specialist for the state Agricultural Extension Service. In his new post he will be supervisor of all of the university's outlying fields.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of \$9 per column inch. All Want Ads cash with order.

HELP WANTED

EXCELLENT OPPORTUNITY FOR EXPERIENCED fertilizer salesman to represent an established company in North Dakota, South Dakota and Minnesota. State age, education, qualifications, experience and salary requirements. Ad No. 1395, CropLife, 141 W. Jackson, Chicago 4, Ill.

POSITION OPEN FOR YOUNG MAN WITH initiative and responsibility with a major West Coast manufacturer of pesticides for formulation development, field testing and service, contacts with public research men, label preparation, etc. Requires basic training in entomology and chemistry. Send personal data, including photograph, as well as complete information as to education, training, experience, etc. Ad No. 1438, CropLife, Box 67, Minneapolis 1, Minn.

MACHINERY FOR SALE

FOR SALE—LIMETER TO TEST SOIL pH. Spidel Farm Supply, Waverly, Neb.

FOR SALE: Sharples Centrifuge type Sulphate Unit Complete. Now in operating condition. Compact and simple to operate. Midwest area. Ad No. 1435, CropLife, Box 67, Minneapolis 1, Minn.

FOR SALE

Used Fertilizer Machinery
Shreveport Fertilizer Works
P. O. Box 1, Shreveport, La.
Detailed List Furnished on Request. Delivery Immediately.
Shreveport Fertilizer Works
P. O. Box 1
Shreveport, Louisiana

Dow To Enlarge Farm Youth Work Through Junior Vegetable Growers

AMHERST, MASS.—Arrangements were completed recently between the National Junior Vegetable Growers' Assn. and Dow Chemical Co. for enlargement of Dow farm youth activity through the educational program of the association.

Objective will include promoting greater interest in agriculture, wider use of modern methods and materials and production of better crops. The association will conduct during 1956, with Dow support, an educational competition in its section on production and marketing of horticultural crops. Control of soil-infesting pests by soil fumigation will be emphasized.

It will be one of the objectives of this competitive program to develop wide awareness of such pests as nematodes, wireworms and other soil infesting pests, together with knowledge of the means of control.

Details of the contest and entry forms are to be distributed through association state leaders, NJVGA headquarters here announced. Conditions for entrance qualification will be adjusted to conform to requirements of, and conditions in, each state.

STORED WHEAT

FARGO—The U.S. Department of Agriculture estimates that 70,359,000 bu. of wheat were stored on North Dakota farms Jan. 1.

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Makes Every Acre a Market!



Corn, cotton and other field crops today make profits in proportion to the fertilizer used. A 100-bushel corn crop needs 160 pounds of nitrogen, 60 pounds of phosphorus and 120 pounds of potash—most of it from fertilizer. The ARCADIAN line of high-nitrogen fertilizers fills the need, and spells profits for you.



Small grains shoot up big yields when your customers feed them plenty of plant food, especially nitrogen. You can sell ARCADIAN for faster, easier, low-cost plant food application by spray, dribble, top-dressing or injection methods to fit your customers' desires. Custom application creates extra business for you.



Pastures, well-fed on ARCADIAN high-nitrogen fertilizers, help cattle to turn out milk and meat at lower cost to fill the growing demand for these high-protein foods. Your customers save labor by spreading fertilizer. They also save labor by letting livestock harvest their own feed.



Fruit crops require nitrogen to make plenty of blossoms to produce profitable yields of big, well-finished fruit. Sell ARCADIAN to provide the easy-spreading, quick-acting nitrogen that makes money for fruit growers and for you.



Vegetables, heavy feeders on nitrogen, thrive on the high-nitrogen fertilizers you sell in the ARCADIAN line. Versatile ARCADIAN products provide nitrogen that's quick-acting and long-lasting, liquid or dry, in nitrate, urea or ammonia forms.



Grass hay crops need plenty of nitrogen with other plant foods to turn out high yields of protein-rich feed. ARCADIAN high-nitrogen fertilizers can make money for you while they make hay for your customers. Sell ARCADIAN this year!

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